Eastern Maricopa County

Area Drainage Master Study

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Hydrology Division
Flood Control District
of Maricopa County

Eastern Maricopa County Area Drainage Master Study

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Glossary of Models

EMCADMS1:	A-N West original model (existing condition)
EMCADMS2:	A-N West original model (future condition)
EADMS12:	A-N West model with the following assumptions 1. Revised CN 2. CAP Overchutes are modeled
EADMS13:	A-N West revised model with the following assumptions 1. Revised CN 2. CAP Overchutes are modeled 3. Areal-Reduction methodology used
EADMS124:	A-N West model (existing condition) with the following assumptions 1. SCS1975 CN 2. CAP Overchutes are modeled 3. SCS Areal-Reduction ratios
EADMS125:	A-N West model (future condition with the following assumptions 1. SCS2000 CN 2. CAP Overchutes are modeled 3. SCS Areal-Reduction ratios
EADMS141:	Detail FCD study of section one, see Plate IV
EADMS142:	Detail FCD study of section two, see Plate IV
EADMS143:	Detail FCD study of section three, see Plate IV
EADMS144:	Detail FCD study of section four, see Plate IV
EADMS145:	Detail FCD study of section five, see Plate IV
EMADMS14:	Detail FCD study combined EADMS141, EADMS142, EADMS143, EADMS144, and EADMS145 models
EADMS14:	EMADMS14 model with Areal-Reduction methodology
HEC-2:	HEC-2 model for the East Maricopa Floodway

1 Introduction

1.1 Purpose

East Maricopa County is developing rapidly, making it one of the most densely populated areas in the state. As urban development progresses, flood damages have significantly increased and are most noticeable in the eastern part of the County, where flood waters exceed street and channel capacity. In order to plan for continued development and to protect the lives and property of current and future residents in the east County, a master drainage study was needed to simulate various rainfall events and their effects on existing and future drainage structures.

As discussed more thoroughly below, the Flood Control District of Maricopa County contracted with A-N West Inc., consulting engineers, to study the area, evaluate it, and create a model. The report issued by A-N West as a result of the study was titled *Eastern Maricopa County Area Drainage Master Study* (EMCADMS), and the resulting model has been given the acronym EMCADMS1. For the purposes of this report, the A-N West study and model are considered the original study and model.

When the District began to use the original model, problems within it arose. The District decided to revise the original model, and many subsequent revisions were made. One such revision has been labelled EADMS13 (discussed more thoroughly below). However, as development in the area increased and the characteristics of the watershed began to change, it became apparent that a more detailed model was needed. The District then created the model EADMS14, which has since been singled out by the District as the model to use when performing drainage analysis for eastern Maricopa County. The detailed model was needed to:

- update the original model to include new development;
- incorporate previously ignored assumptions;
- modify certain assumptions based on new guidelines, or ones that were erroneous in the original model;

- subdivide the model to highly detailed subbasins for use in planning and development review; and
- develop recommendations for further use of this study and model.

1.2 Scope

The remainder of this chapter will outline the boundaries and descriptions of the study area, as well as the studies and models used when creating the FCD Revised and Detailed Models.

Chapter 2 details the computer modelling software, precipitation data, methodology, and assumptions used in revising the original A-N West model and in creating the detailed model.

Chapter 3, *Study Approach*, provides explanations for some of the revisions that needed to be made to the original A-N West study when developing EADMS13. Chapter 3 also provides an explanation as to the importance of certain factors that were incorporated into EADMS14 by discussing their impact on the watershed.

Existing models—the original model, two models created by the Soil Conservation Service (SCS1975 and SCS2000), and the two revisions made by the District—are discussed and compared in more detail in Chapter 4. This chapter also explains how the District's revisions and the elements considered will affect the watershed; compares and tabulates the results of the different models; and clarifies the reasons for needing the new models.

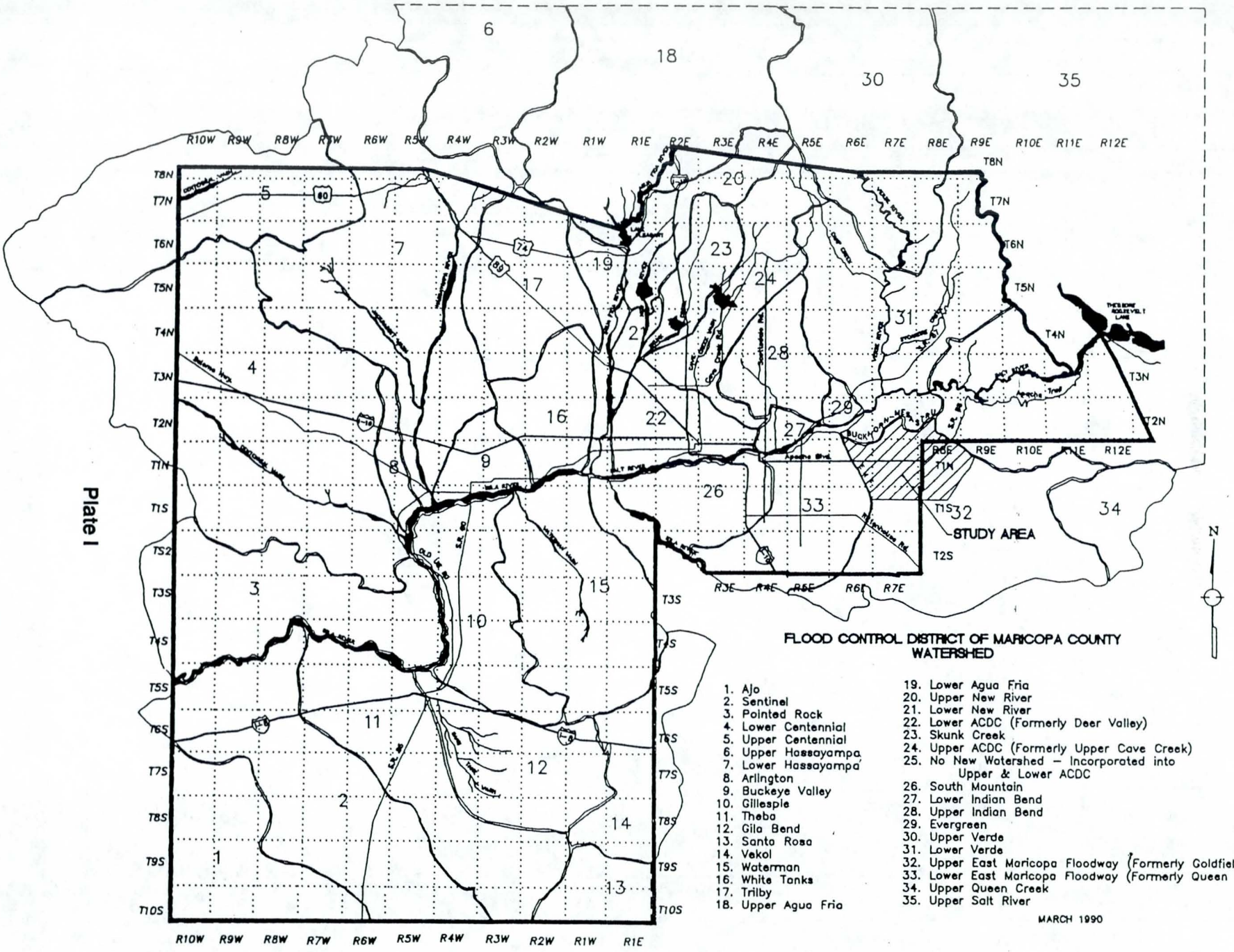
Chapter 5 provides some important recommendations for using EADMS14, how to improve the watershed for solving existing flooding problems, and how to maintain the EADMS14 model.

Chapter 6 gives a summary of all the efforts that have been taken to revise the original model in developing EADMS13 and EADMS14.

1.3 Study Area Boundaries and Descriptions

The East Maricopa County Area Drainage Master Study covers approximately 68 square miles between the Salt and Gila Rivers. The study area is located within the *Maricopa County Watershed 32 Upper East Maricopa Floodway*, see Plate I, which is part of the larger Gila Watershed. The Watershed Hydrological Soil group is dominated by type B Soil. The study area slopes to the southwest. The natural drainage features in the study area consist of numerous small and shallow washes. When the capacities of these small washes are exceeded, overflow occurs as sheet flow.

The watershed area is partially urbanized. Urbanization has occurred at a greater rate in the north than in the south. The area north of the Superstition Freeway alignment is approximately 45 percent developed, while the area south of the freeway alignment is less than 15 percent developed.



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
WATERSHED

1. Ajo
2. Sentinel
3. Pointed Rock
4. Lower Centennial
5. Upper Centennial
6. Upper Hassayampa
7. Lower Hassayampa
8. Arlington
9. Buckeye Valley
10. Gillespie
11. Theba
12. Gila Bend
13. Santo Rosa
14. Vekol
15. Waterman
16. White Tanks
17. Trilby
18. Upper Agua Fria
19. Lower Agua Fria
20. Upper New River
21. Lower New River
22. Lower ACDC (Formerly Deer Valley)
23. Skunk Creek
24. Upper ACDC (Formerly Upper Cave Creek)
25. No New Watershed – Incorporated into Upper & Lower ACDC
26. South Mountain
27. Lower Indian Bend
28. Upper Indian Bend
29. Evergreen
30. Upper Verde
31. Lower Verde
32. Upper East Maricopa Floodway (Formerly Goldfield)
33. Lower East Maricopa Floodway (Formerly Queen Creek
34. Upper Queen Creek
35. Upper Salt River

MARCH 1990

Plate I

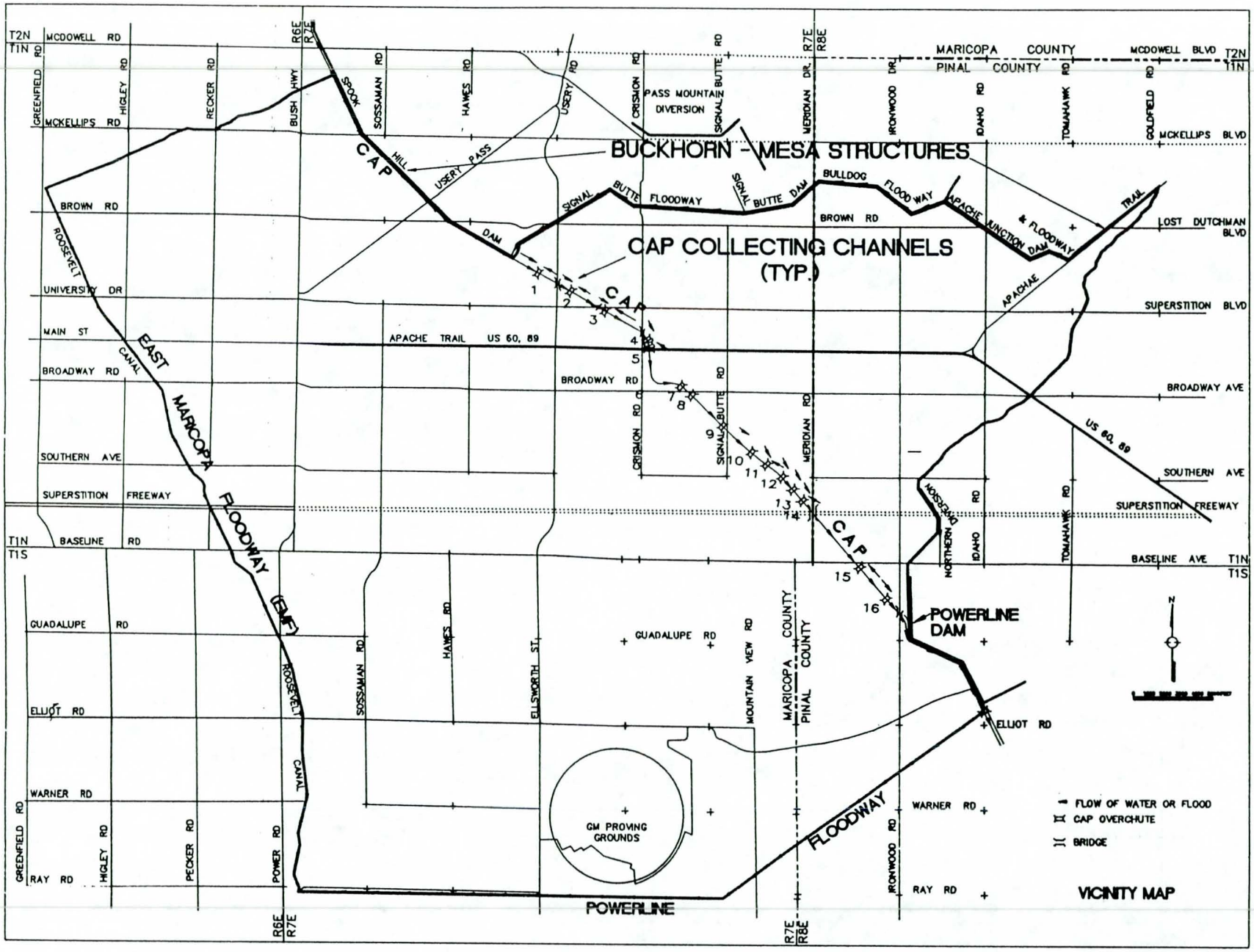

BUCKHORN - MESA STRUCTURES
CAP COLLECTING CHANNELS (TYP.)
PASS MOUNTAIN DIVERSION
MARICOPA COUNTY
PINAL COUNTY
CAP
SIGNAL BUTTE FLOODWAY
SIGNAL BUTTE DAM
BULLDOG FLOOD WAY
APACHE JUNCTION DAM
& FLOODWAY
USERY PASS
HILL
SPOOK
DAM
EAST MARICOPA FLOODWAY (EMF)
ROOSEVELT CANAL
POWERLINE DAM
POWERLINE
FLOODWAY
GM PROVING GROUNDS
APACHE TRAIL US 60, 89
US 60, 89
APACHE TRAIL
MCDOWELL RD
MCKELLIPS RD
BROWN RD
UNIVERSITY DR
MAIN ST
BROADWAY RD
SOUTHERN AVE
SUPERSTITION FREEWAY
BASELINE RD
GUADALUPE RD
ELLIOT RD
WARNER RD
RAY RD
MCDOWELL BLVD
MCKELLIPS BLVD
LOST DUTCHMAN BLVD
SUPERSTITION BLVD
BROADWAY AVE
SOUTHERN AVE
SUPERSTITION FREEWAY
BASELINE AVE
T2N
T1N
T1S
R6E
R7E
R8E
GREENFIELD RD
HIGLEY RD
RECKER RD
BUSH HWY
SOSSAMAN RD
HAWES RD
USERY RD
CRISMON RD
SIGNAL BUTTE RD
MERIDIAN DR
IRONWOOD DR
IDAHO RD
TOMAHAWK RD
GOLDFIELD RD
POWER RD
ELLSWORTH ST.
MOUNTAIN VIEW RD
MERIDIAN RD
NORTHERN RD
FLOW OF WATER OR FLOOD
CAP OVERCHUTE
BRIDGE
VICINITY MAP

Plate II

The study area is bounded by the Buckhorn-Mesa Flood Control Structures on the north, North Diversion and Powerline Dam on the east, Powerline Floodway on the southeast and south, East Maricopa Floodway (EMF) on the west, and the drainage divide on the northwest (see Plate II).

The Buckhorn-Mesa structures control a watershed area of approximately 42 square miles north of the study area, and are designed for a 100-year event. The structures are earth and rock-filled with concrete pipe principal spillways and emergency spillways at each dam. The principal spillways are designed to regulate and control the runoff resulting from the 100-year frequency flood event. Plate II shows the principal spillway outlet channels and floodways connecting—upstream to downstream—Apache Junction FRS, Bulldog Floodway, Signal Butte FRS, Pass Mountain Diversion, and Spook Hill FRS. Apache Junction Dam, the last of the Buckhorn-Mesa structures, was complete in 1988 and ranges in height from 21 feet to 57 feet. Tables 1.1, 1.2, and 1.3 provide pertinent data for the Buckhorn-Mesa Watershed Project. Plate III shows the locations of the flood control structures in the east County area.

Table 1.1
East Maricopa County Retarding Structures

Structure	Drainage Area, square miles	Reservoir Capacity, acre-feet	Maximum Height, feet	Length, miles	Top Width, feet	Emergency Spillway Width, feet	Principal Outlet Capacity, cfs
Apache Junction	5.72	552	22	1.63	14	100	81
Signal Butte	16.36	1,365	39	1.33	18	140	160
Spook Hill	13.59	1500±	25	3.98	14	—	808
Powerline	48.65	4,194	24	2.53	14	—	—

Table 1.2
Pass Mountain Diversion

Drainage Area, acres	2546
Type of Structure	Earth Embankment/ Earth Channel
Diversion Length, feet	6,635
Oulet Length, feet	2,800
Diversion Maximum Height, feet	13
Top Width, feet	14
Side Slopes	3 to 1
Outlet Bottom Width, feet	200
Number of Drop Structures	6

Table 1.3
East Maricopa County Floodways

Floodway	Shape	Length, miles	Maximum Width Bottom, feet	Capacity, cfs
Bulldog	Cone Rectangular Trapezoidal Earth	1.40 0.28	50 130	4700
Apache Junction	Concrete Rectangular	0.29	38	1560
Signal Butte	Earthen Trapezoidal Concrete Rectangular	1.60 1.13	32 14	2100
Powerline	Trapezoidal	8.75 lined 1.82 unlined	6 – 8 50 – 60	600 – 3140

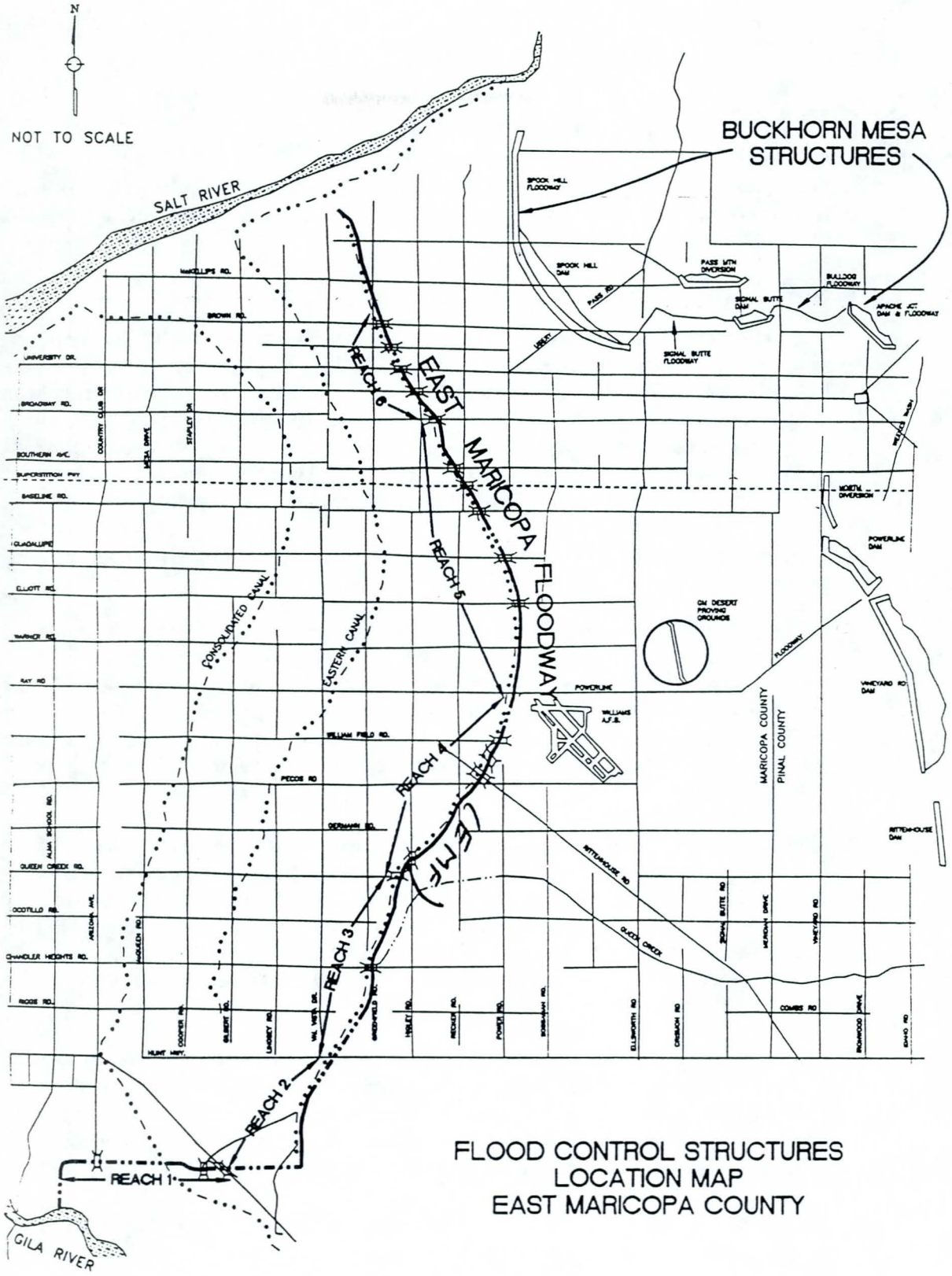
Powerline FRS is the side boundary of the study area. Powerline FRS, built in 1967, is an earthen dam with a concrete pipe principal outlet and an emergency spillway. The Dam controls more than 48 square miles, is approximately 24 feet high, and is designed for the 100-year frequency flood event. The principal outlet structure connects to the Powerline Floodway, located along the south and southeast boundary of the study area.

Powerline Floodway is a concrete-lined channel used to convey floodwater from Powerline, Vineyard, and Rittenhouse flood retention structures to the EMF.

The EMF was designed by the SCS to collect the 100-year excess runoff from this watershed. The construction of the Floodway was completed in 1989 (see Plate III for the reach locations).

Other features which significantly impact the drainage on this watershed are the Central Arizona Project (CAP) Canal, U.S. Highway 60/89 (Apache Boulevard), and the Superstition Freeway. The CAP Canal enters at the northwest portion of the study area and crosses to the southeast (CAP Canal impacts are detailed in section 3.2.6). Highway 60/89 is an important drainage factor because it traverses from the mid-west area of the watershed to the east boundary of the study area. Highway 60/89 culvert structures are designed to convey discharges from north to south. (See appendices for box culvert sizes and locations.) The Superstition Freeway also traverses from the mid-west area of the watershed to the east boundary of the study area between Southern Avenue and Baseline Road. The freeway drainage system is reducing the flooding problems in the study area south of the freeway. (For more detail, see Plate V and Section 4.4.1.)

The jurisdictions within the study area are the City of Mesa, the City of Apache Junction, Pinal County, and Maricopa County.



FLOOD CONTROL STRUCTURES
LOCATION MAP
EAST MARICOPA COUNTY

Plate III

1.4 East County Drainage Studies

While several drainage studies have been made with regard to the east County area, four studies provided the District with the information needed to create the revised and detailed models.

1.4.1 Soil Conservation Service Studies

The U.S. Department of Agriculture's Soil Conservation Service (SCS) prepared several studies for design and construction of the East Maricopa Floodway (formerly the Roosevelt Water Conservation District Floodway). The original study was completed in the early 1960s and was later revised in the early 1970s. The SCS also made an estimate for the year 2000 condition, and the discharge hydrograph from this study (SCS2000) was used to design the EMF. The SCS approach is discussed in more detail within the *Discussion and Results* section of this report.

1.4.2 Eastern Maricopa County Area Drainage Master Study, EMCADMS1

In 1984, the Flood Control District of Maricopa County initiated a study to evaluate existing flooding conditions, locate problem areas, and provide alternative solutions to the flooding problems. The Eastern Maricopa County Area Drainage Master Study (EMCADMS1), was completed by A-N West Inc., in January of 1987. That study evaluates east Maricopa County for existing and proposed conditions. Since 1987, the EMCADMS has become a base study for other watershed studies of this area.

A-N West's EMCADMS estimated that, for existing conditions, the peak discharge from the study area is approximately three times the capacity of the EMF (as designed by SCS), and the future condition peak discharge would be approximately five times the capacity of the EMF. Based on this result, A-N West developed structural alternatives to assist in solving future problems. However, because the total cost of implementing these structural alternatives was calculated to be $78,100,000, construction has not proceeded.

Since the completion of A-N West's study, there have been some changes in the area that have had significant impacts on their results. After carefully reviewing EMCADMS, the District determined that the study should be adjusted to reflect the latest drainage developments to present the existing conditions, as well as be adjusted to more nearly match the hydrologic condition of the watershed.

1.4.3 Superstition Freeway Comprehensive Offsite Drainage Plan, SFCODP

The Arizona Department of Transportation (ADOT) developed the SFCODP in order to construct the Superstition Freeway. A-N West prepared this study, too, as a subcontractor to Tudor Engineering Company. The SFCODP, which is based on EMCADMS, was completed and approved by ADOT in February, 1987. The study

considers the possibility of a portion of Weekes Wash flows breaking into the watershed, in addition to all the assumptions that were made in the EMCADMS.

1.4.4 Master Drainage Plan for Superstition Springs

Superstition Springs Development Company, a Division of Western Savings & Loan Association, also conducted a master drainage plan for part of this area. This master plan is based on EMCADMS, and was prepared by Coe & Van Loo Consulting Engineers, Inc., in 1987.

2

Specifications and Methodologies

2.1 Model

The U.S. Army Corps of Engineers' Flood Hydrograph Package HEC-1 (February, 1981, 1985 revision), was used to model EMCADMS. The District has also used HEC-1 to model the revised and detailed models.

2.2 Precipitation Data

The precipitation depth-duration data used by A-N West in the original study was adopted for modeling this study. Precipitation data were determined by using the *NOAA Atlas No. 2, Precipitation-Frequency Atlas of the Western United States*, Vol. VIII, Arizona, 1973, and *Addendum to Hydrologic Design for Highway Drainage in Arizona*, April, 1975. Table 2.1 presents the precipitation data used for A-N West's EMCADMS and the District's revised study.

Table 2.1
Precipitation Data

Return Period Years	Precipitation Values, inches	
	6 hour duration	24 hour duration
2	1.15	1.35
5	1.60	1.90
10	1.90	2.30
25	2.35	2.80
50	2.70	3.20
100	3.05	3.65

The District used the SCS Type II rainfall distribution—the same as in the A-N West study. SCS developed the synthetic 24-hour rainfall distributions from available National Weather Service duration-frequency data (Hershfield 1961; Frederick et al., 1977) and local storm data.

2.3 Methodology

2.3.1 Rainfall Excess

The SCS Runoff Curve Number (CN) method (SCS TR-55, June 1986 version) was used to determine rainfall excess in the original study. To determine the runoff curve numbers, the District considered the hydrologic soil groups, cover type, and hydrologic condition of the watershed. Recently the CN method has come under increased scrutiny and concern that it is not the most representative excess method to use due to its time independency. However, for overall consistency, the use of the CN method was maintained.

2.3.2 Overland Flow & Routing Method

The Kinematic Wave procedure was used for overland flow and routing techniques. The Kinematic Wave Methodology does not attenuate peak discharge, or infiltration, and should be used on urban areas. For overall consistency, this method was used.

2.4 Assumptions

The following assumptions and modifications have been made in revising the original A-N West study. Some of these assumptions were already made in the original study, however, further investigation has been done by the District to model the area. Based on this investigation, the following additional assumptions have been made. (EMCADMS1 used the assumptions listed in section 2.4.1; EMADMS14 and EADMS14 used the assumptions listed in section 2.4.1 *and* 2.4.2.)

2.4.1 EMCADMS1 Assumptions

1. The Buckhorn-Mesa flood retarding structures have been completed and provide 100-year flood protection.

2. The North Diversion and Powerline FRS provide 100-year flood protection.

3. All culverts under Apache Trail provide 100-year capacity and do not divert the peak runoff.

4. All models represent the 100-year frequency and 24-hour duration event, unless otherwise noted.

2.4.2 Flood Control District's New Assumptions

1. Weekes Wash breaks out at approximately Junction Road (between Superstition Boulevard and Broadway Road) and the estimated breakout enters this watershed. (See *A Hydrologic Analysis of the Powerline FRS*, Flood Control District of Maricopa County, January 1989.)

2. Superstition Freeway (SR 360) construction is complete. All proposed basins for this freeway are in place and operational.

3. The District has assumed the percentages of diverted peak flow and calculated a rating curve to be used in different locations, based on field investigations.

4. The curve number calculations are based on the existing land use conditions.

5. The *existing flooding condition* computed by the District's model is the *worst flooding condition*. The Uniform Drainage Manual is accepted by Maricopa County Board of Supervisors, meaning all new development is required to retain discharge runoff generated by the 100-year, 2-hour event. This requirement, which is accepted by the District and all jurisdictions within Maricopa County will lead to the construction of more retention basins within the east County area. New retention basins will most likely reduce some of the flooding problems within the study area.

3

Study Approach

The District's revisions to the original study are categorized in two parts. The first approach, EADMS13, updates the A-N West model with some minor adjustments. The second revision, EADMS14, is a complete detailed study of the watershed.

3.1 First Approach: EADMS13

The first approach was to revise some of the parameters which were used to model the watershed area in EMCADMS1. The curve numbers used in the EMCADMS1 were no longer accurate for the District's purposes. The curve numbers were recalculated using the 1987 Landis Aerial Photos and the SCS TR-55 suggested curve numbers (dated June 1986).

Another consideration in updating the EMCADMS1 was the Central Arizona Project (CAP) Canal overchutes. The CAP overchutes are important factors to this study, since they control the flood routing discharges through the CAP. Rating curves for the overchutes needed to be developed to better reflect the current conditions of the east County. Field data, collected by District personnel, and the Bureau of Reclamation *Salt-Gila-Aqueduct Reach-I Plans* (January 1974), were used to accomplish this task.

The size of this watershed and the concern for the hydrologic results at the EMF called for a more realistic depth-area ratio. The District opted to use the areal-reduction method described in the *1973 National Weather Service NOAA Atlas 2*. (See Table 4.2 for a comparison of results obtained using the areal-reduction method versus those used without.)

The District also developed revised models reflecting the SCS assumption that the initial one-inch runoff would be retained on all developments.

3.2 Second Approach: EADMS14

Since the completion of EMCADMS1, there have been several significant events having direct impact on it. In order to have an updated model, these events had to be addressed. Furthermore, the District was interested in the magnitude of peak discharge of significant washes at their intersections with major roads. The EMCADMS1 model divided the study area into approximately 52 large subareas and, hence, the modeling results were not focused on small areas to calculate this type of information. To utilize the EMCADMS1 model in these calculations, a complete detailed study was needed to reevaluate the project.

The following sections describe the revisions that were made to the A-N West study. There were several reasons for the revisions including problems with the data that had been used for modeling, new master drainage design plans that had been completed since the A-N West study was performed, and the need for additional information. The detailed model is known as the EADMS14.

3.2.1 New Development

New development within the study area has increased the percentage of impervious areas. This increase has greatly affected peak flow discharge from the area. The District used the most recent aerial photos available and the data developed was used to update the study and to estimate the percentage of impervious areas.

3.2.2 Curve Number Revision

In June 1986, SCS completed a new version of TR-55, which provided curve numbers for urban watersheds. In updating the model we utilized the new TR-55 suggested curve number values, reducing the curve numbers for the urban watershed.

3.2.3 Superstition Freeway

The Superstition Freeway drainage design is nearing final approval. The Superstition Freeway Comprehensive Offsite Drainage Plan (SFCODP) is divided into three phases: 1) Powerline Road to Ellsworth Road, 2) Ellsworth Road to Ironwood Road, and 3) Ironwood Road to Goldfield Road. In preparing EADMS14, the District used the proposed basins designed in Phase 1, dated February, 1987. The drainage report for Superstition Freeway Phase 1 was not used, because it had not yet received final approval. For Phase 2, the District used the Final Report of SFCODP Phase 2, which was completed and finalized by Coe & Van Loo Consulting Engineers, Inc. in October, 1987. For Phase 3, also completed and approved, the District used the Final Drainage Study Report for Superstition Freeway by Tudor Engineering Company, dated November, 1987.

3.2.4 Weekes Wash Breakout

EMCADMS1 did not consider any breakout from Weekes Wash entering the study area. However, other studies—Cella Barr Associates' Flood Insurance Study (FIS) for the floodplain of Weekes Wash and the SFCODP—refer to a breakout from

Weekes Wash entering the watershed. Field investigation conducted by the District indicated that the FIS and SFCODP were correct about the Weekes Wash breakout. Therefore, the District conducted a survey to collect actual cross section data from the area where breakouts would occur.

Survey cross sections were coded into the U.S. Army Corps of Engineers' Water Surface Profile HEC-2 model to evaluate the magnitude of this breakout (for a more detailed study, refer to *A Hydrologic Analysis of the Powerline FRS*, Flood Control District of Maricopa County, January 1989). Based on the District's report, the breakout would occur at the intersection of Weekes Wash and Junction Road, which is approximately one-half mile south of the Superstition Freeway.

3.2.5 Watershed Redelineation

The District's field investigations revealed that watershed subbasins were different than what had been delineated in EMCADMS1. Based on the field data, 1987 Landis Aerial Photos, and U.S.G.S. topographic map overlays, the subbasins were redelineated. In the redelineation, the subbasins were changed to a lower resolution (approximately 10 acres) to locate major washes and estimate discharges where major washes intercept arterial streets.

3.2.6 CAP Overchutes

There are approximately 16 CAP canal overchutes in this watershed, through which the upstream flows pass over the canal. The overchutes are designed to convey 100-year peak flow. To determine the impact of these overchutes and to develop a storage rating curve for the overchutes, the District used topographical maps from the Bureau of Reclamation's *Salt-Gila Aqueduct Reach I Project*, January 1974, in conjunction with field data. The storage rating curves were inserted into the revised model.

3.2.7 Existing Basins

To limit the increase in peak flow discharges, new development in the east County is now required to provide stormwater retention facilities. As a result of this requirement, there are some large retention basins constructed within new developments which effectively reduce the peak flow. These larger basins are now reflected in the model. The District has estimated the contributions of some of the retention basins and has revised the model to reflect the attenuation of the peak.

3.2.8 Areal Reduction Procedure

Depth-area relations for the study area were developed based on the procedure suggested by the NOAA Technical Memorandum NWS HYDRO-40 (*Depth-Area Ratios in the Semi-Arid Southwest United States*, August, 1984). The data for developing the areal-reduction curves were collected from the Walnut-Gulch Watershed area, which is close to Tucson. These curves are more representative of the depth-rainfall ratios in the east County study area. The depth-area relationship is useful in determining average rainfall depth for the watershed. The areal reduction procedure which was used is based on the average-area curve for fixed areas.

3.2.9 EMF Capacity Calculation

To evaluate the actual capacity of the EMF, which is the outlet to the watershed, the EMF as-built construction plans were used to determine the floodway cross sections, slopes, and roughness coefficients (Manning's N value). Some field investigations were also performed. The HEC-2 Water Surface Profile computer program developed by the U.S. Army Corps of Engineers was used. Rating curves were then inserted into the HEC-1 model so that flows exceeding the joint channel and overland capacities would overtop the EMF structure and flow to the west.

3.2.10 Velocity Evaluation

After developing each model section, the District examined the velocities of the subbasins which were computed by the HEC-1 model and calculated the actual subbasin velocities for each section. The results from HEC-1 and the calculations agreed within reasonable ranges. See appendices for velocity calculations.

4

Discussion and Results

4.1 EMCADMS1

The A-N West original study model, EMCADMS1, determined that the 100-year peak discharge at the intersection of the EMF and Ray Road had increased from 5,890 cfs, as calculated using the SCS2000 model, to 19,634 cfs. (For a more detailed discussion of SCS2000, see section 4.3.2.) Part of this increase resulted from urbanization of the watershed. The SCS made the assumption that each development would retain one inch of runoff, while EMCADMS1 and EMCADMS2 modeled the existing and future conditions with no retention assumed (since some of the jurisdictions within the area did not institute any retention regulations).

The EMCADMS1 used unreasonably high curve numbers, it did not consider any of the existing retention basins within the watershed area, and no areal-reduction methodology was used. These factors had the most significant impact on the high discharge results developed in EMCADMS1.

4.2 EADMS13

The EADMS13 model was created by the District by revising EMCADMS1. All the assumptions and the watershed boundaries in EADMS13 are the same as EMCADMS1, with the exception of the following three major revisions.

1. After carefully reviewing EMCADMS1, the District realized that the selected curve numbers for the existing condition model were very high compared to the latest TR-55 curve numbers. The percentage of pervious and impervious areas was calculated based on our field investigations and the 1987 Landis aerial photos. Using the latest TR-55 suggested methodology, the curve numbers decreased significantly. The results of these revisions indicate that adjusting the curve numbers selected by A-N West was one of the important factors in decreasing the peak discharges. However, these values were still higher than

those used by the SCS when they assumed one-inch retention. Table 4.1 compares the A-N West curve numbers with the adjusted ones and those used by the SCS in their future condition model, SCS2000. (For more information on SCS2000, see section 4.3.2.)

2. The District developed a storage rating curve to estimate the possibility of attenuation at the Central Arizona Project (CAP) Canal overchute inlets. The results indicate a significant attenuation of peak discharges at some overchute inlets.

3. When assessing the capacity of the EMF, preventive hydrology dictates the use of the areal-reduction procedure on a watershed of this size.

The above revisions reduced the calculated 100-year peak discharge generated at the intersection of Ray Road and the EMF from 19,600 to 12,600 cfs—about a 36 percent reduction to the peak discharge calculated by A-N West. Table 4.2 shows the results of the SCS Future Condition Model, SCS2000 (which assumes one-inch retention), the EMCADMS1, and the District's revision models without areal-reduction (EADMS12) and with areal-reduction (EADMS13) effects.

Table 4.1
EMCADMS1 & EADMS13 Curve Number Comparison

Subbasin ID	EMCADMS1	SCS2000	EADMS13	Subbasin ID	EMCADMS1	SCS2000	EADMS13
2	81	66	75	60	83	72	77
4	83	82	82	62	80	79	77
6	84	83	83	68	78	69	76
8	83	73	80	70	85	81	83
10	83	74	78	72	85	81	83
12	84	75	81	74	85	80	79
14	86	74	81	76	84	81	82
16	84	80	80	78	83	75	77
18	83	79	79	82	84	75	77
20	85	86	85	84	83	75	77
24	86	73	82	86	83	76	77
26	84	73	80	88	83	75	77
28	79	72	78	90	83	77	77
30	75	52	75	92	82	75	77
32	85	81	82	94	84	80	82
34	84	80	80	96	83	76	77
36	84	80	82	98	83	76	80
38	84	80	81	100	83	76	78
40	84	79	80	102	83	77	77
46	85	75	85	104	83	77	77
48	81	79	77	106	83	77	77
50	79	79	79	108	82	75	77
56	75	65	75	110	83	75	77
58	84	75	77				

Table 4.2
100-year 24-hour Peak Discharges

Location at EMF	SCS2000, cfs	Model ID No.	EMCADMS1, cfs	EADMS12, cfs	EADMS13, cfs (with A-R)
Brown Road	1,160				
University Boulevard		RO3	990	582	521
Apache Trail (US 60)	1,965	CO5	1,880	1,353	1,234
Broadway Road	2,290	CO7	3,134	2,964	2,770
Southern Avenue	3,440	CO9	2,874	3,375	3,063
Superstition Freeway	4,720	CO27	6,281	5,220	4,747
Baseline Road	4,700	CO29	6,029	5,315	4,766
Guadalupe Road	4,860	CO55	8,139	7,084	6,404
Elliot Road	5,110	CO67	11,517	9,493	8,397
Warner Road	5,280	CO93	11,639	12,665	10,815
Ray Road	5,890	CO111	19,634	14,954	12,637

Revising the curve numbers and modeling the CAP overchute into the A-N West model decreased the peak discharge along the EMF by approximately 23 percent. Including the areal-reduction methodology, the peak discharge was reduced by about 36 percent in the vicinity of Ray Road and the EMF.

4.3 SCS Studies

The SCS conducted several studies for the east County when they designed the required capacity of the EMF. The two studies of concern in this report are: the *SCS Existing Condition Model*, SCS1975, and the *SCS Future Condition Model*, SCS2000.

4.3.1 SCS1975

The SCS original study was completed in the early 1960s and estimated a peak discharge downstream of Queen Creek of about 5,000 cfs. Due to the lack of computer program availability, this study was manually calculated.

In the early 1970s, the SCS made a new hydrology study using the computer program TR-20 (whereas the EMCADMS1 and District revisions used the HEC-1 modelling program). In the Queen Creek area, the SCS study estimated an approximate peak discharge downstream of 30,000 cfs. The SCS recognized that the peak discharge appeared too high based on limited historical data with reference to overtopping of the EMF.

The TR-20 study was revised in the mid-1970s, using revised curve numbers, time of concentration numbers, rainfall distributions, etc. For instance, overland flow velocity was estimated at about 1.5 to 2.0 fps, and the irrigated agriculture curve number was equal to 50, due to about 2.0 to 2.5 inches of initial storage before runoff began. SCS1975 gives a revised peak discharge of about 9,000 to 10,000 cfs

downstream of the Queen Creek area. The SCS1975 model has the following specifications:

1. The Soil Conservation Service Project Formulation Technical Release Number 20 Computer program was used to model the watershed.

2. The 100-year event and 24-hour duration precipitation depth data was used in conjunction with the SCS type II rainfall distribution.

3. The SCS runoff early 1960 curve numbers were revised and updated for use in determining the rainfall excess. The rainfall excess is consistent with the FCD model. Table 4.3 displays the SCS1975 curve numbers used in the model.

4. The areal-reduction methodology was used to determine the average rainfall depth for the watershed. The SCS developed its own depth-area relations for the study which is somewhat different than the NOAA Atlas 2 suggested areal-reduction curve for the western United States and NOAA Technical Memorandum NWS HYDRO-40. Table 4.4 displays the areal-reduction factors developed and used in the SCS1975 model.

Table 4.3
SCS Study Curve Number Comparison

Subbasin ID	SCS1975	SCS2000	EADMS13	Subbasin ID	SCS1975	SCS2000	EADMS13
2	67	66	75	60	72	72	77
4	83	82	82	62	77	79	77
6	82	83	83	68	69	69	76
8	79	73	80	70	81	81	83
0	77	74	78	72	82	81	83
2	77	75	81	74	80	80	79
4	77	74	81	76	81	81	82
6	80	80	80	78	77	75	77
8	79	79	79	82	72	75	77
0	86	86	85	84	77	75	77
24	73	73	82	86	77	76	77
26	73	73	80	88	77	75	77
28	68	72	78	90	77	77	77
30	53	52	75	92	75	75	77
32	82	81	82	94	80	80	82
34	80	80	80	96	77	76	77
36	80	80	82	98	77	76	80
38	80	80	81	100	77	76	78
40	80	79	80	102	77	77	77
46	80	75	85	104	77	77	77
48	76	79	77	106	77	77	77
50	73	79	79	108	75	75	77
56	65	65	75	110	77	75	77

Table 4.4
SCS Areal-Reduction Conversion Ratios

Area, sq. miles	Conversion Ratio	Rainfall, inches
1	100	3.65
5	97	3.54
25	93	3.39
55	90	3.28
95	87	3.18
150	84	3.07
220	82	2.99
300	80	2.92
385	78	2.85

4.3.2 SCS2000

To create the Future Condition model, the SCS made an estimate for year 2000 conditions using progressed land use maps (model SCS2000). The estimated effect of urbanization on CNs and TCs was made and year 2000 peaks were calculated. The SCS2000 model was used by the SCS to develop the design capacity of the East Maricopa Floodway.

An agreement between the SCS and the District stated that future peak discharges would approximately equal those in the SCS1975 model. Therefore, to reduce the effects on future peak discharges of increased runoff and more efficient channels, the SCS made an analysis to determine how much on-site storage would be needed to maintain 1975 peak discharge estimates. The analysis showed that approximately one-inch of storage would be needed on all development between 1975 and 2000. The effect of the assumed storage was implemented in the SCS computer model by reducing the CN.

In order to develop the SCS2000 model, the SCS assumed that some parts of the contributing watershed would be developed by the year 2000. Therefore, the curve numbers were selected to simulate the conditions in the year 2000. Maricopa County zoning plans were used in estimating the types of development for the year 2000. However, most of the area south of the Superstition Freeway alignment was assumed to remain undeveloped, with no changes in watershed characteristics. See Table 4.3 for a comparison of the CNs in the SCS2000 model (with one-inch retention storage assumption and used to design the EMF) and the CNs used in the SCS1975 and EADMS13 models.

4.3.3 SCS Assumption Analysis

The District built the SCS individual assumptions and combination assumptions into their revised model, developing a series of models to evaluate the effect of these assumptions along different reaches of the EMF. Table 4.5 shows the results of a comparison between peak discharges at various points along the EMF with seven

different models created by the District. The models used in the comparison are defined as follows:

SCS2000: The SCS model which is developed to reflect the east County watershed in the year 2000, with one-inch runoff storage.

EADMS12: The revised A-N West model which includes the 1986 TR-55 CNs and CAP overchute modeling.

EADMS121: Same as EADMS12 with the SCS areal-reduction ratios.

EADMS122: Same as EADMS12 with the SCS1975 CNs.

EADMS123: Same as EADMS12 with the SCS2000 CNs.

EADMS124: Same as EADMS12 with the SCS1975 CNs and areal-reduction ratios.

EADMS125: Same as EADMS12 with the SCS2000 CNs and SCS areal-reduction ratios.

EADMS13: Same as EADMS12 with the 1973 National Weather Service NOAA Atlas 2 areal-reduction ratios.

The SCS assumes that, as urban development proceeds, the future developments will be required to attenuate the discharges from their site, which eventually contribute to the peak discharges into the EMF. Therefore the existing condition model (SCS1975) generates the highest peak discharges of the SCS models. This assumption is clearly shown in the results from the curve number comparison generated in models EADMS124 and EADMS125.

Table 4.5 reflects an increase in estimated peak discharges from 5,890 cfs when using SCS2000 to 9,545 cfs when using EADMS124—a 62 percent increase in peak discharges. When using EADMS125, the increase is only 53 percent, or 5,890 cfs to 8,988 cfs.

Table 4.5
SCS Assumptions Comparison Discharges 100-Year 24-Hour Peak Discharges

Location at EMF	SCS2000, cfs	Model ID No.	EADMS12, cfs	EADMS121, cfs	EADMS122, cfs	EADMS123, cfs	EADMS124, cfs	EADMS125, cfs	EADMS13, cfs
Brown Road	1,160								
University Boulevard		RO3	582	395	533	289	260	239	521
Apache Trail (US 60)	1,965	CO5	1,353	1,197	920	850	828	764	1,234
Broadway Road	2,290	CO7	2,964	2,666	2,788	2,964	2,517	2,666	2,770
Southern Avenue	3,440	CO9	3,375	2,860	3,083	3,293	2,573	2,825	3,063
Superstition Freeway	4,720	CO27	5,220	4,234	3,848	3,645	2,981	2,933	4,747
Baseline Road	4,700	CO29	5,315	4,220	3,884	3,661	2,967	2,944	4,766
Guadalupe Road	4,860	CO55	7,085	5,703	5,614	5,360	4,506	4,392	6,404
Elliot Road	5,110	CO67	9,493	7,459	7,722	7,150	6,150	5,720	8,397
Warner Road	5,280	CO93	12,665	9,452	10,672	10,069	8,159	7,625	10,815
Ray Road	5,890	CO111	14,954	10,793	13,144	12,369	9,545	8,988	12,637

In the late 1970s to mid 1980s, with the commencement of construction on the EMF, inlet hydrology was completed for each of the six reaches as required. During these analyses, point rainfall amounts and existing or present CNs were used to estimate design discharges for each inlet. Drainage areas and channel configurations were modified as needed over those used in the year 2000 computer run.

4.4 EADMS14

The EADMS14 model was developed to give the Flood Control District an up-to-date multipurpose model enabling them to locate and correct local drainage problems. This high-resolution model allows analysis of the East Maricopa County Watershed in greater detail than was provided in earlier models.

In order to create this model, however, the subbasins had to be reduced in size to a minimum of ten acres. As a result, the number of watershed subbasins increased from 47 in the original study to 318 in the EADMS14 model. Likewise, the data file model increased from 840 data cards to approximately 6,000. Because of the tremendous growth of the model, the watershed was divided into five sections (see Plate IV), and a model was created for each section. The section models were named EADMS141, EADMS142, EADMS143, EADMS144, EADMS145. (EADMS141 is directly upstream of EADMS142, EADMS142 is directly upstream of EADMS143, etc.) Dividing the sections this way allows the section models to work independently of each other by using the discharge output from the upstream model (i.e., EADMS141) as the discharge input to the downstream model (EADMS142).

Making each section model separate from the others and linking them (to create EADMS14) saved significant program running time by eliminating the need to run the entire program to calculate changes in one of the downstream sections. In other words, a change in section 4, EADMS144, would not require rerunning the entire program as the output discharge from section 3, EADMS143, would remain the same. This saves approximately two hours of program run-time per section that does not have to be repeated. Hence, in this example, about six hours are saved.

Another point worth noting is that, while the District recommends using areal-reduction methodology for calculating the depth-area ratio and has incorporated it into EADMS14, the District has also created a model that does not use areal-reduction methodology. That model is identical to EADMS14, with the exception of the areal-reduction methodology, and has been labelled EMADMS14. The difference in the results obtained by using the *without A-R* model is discussed more fully, in section 4.4.4.

Chapter 3 briefly discussed the factors that warranted revision of the EMCADMS1 model. The following sections provide a more detailed review of some of those factors and how they were incorporated into the high-resolution, detailed model—EADMS14.

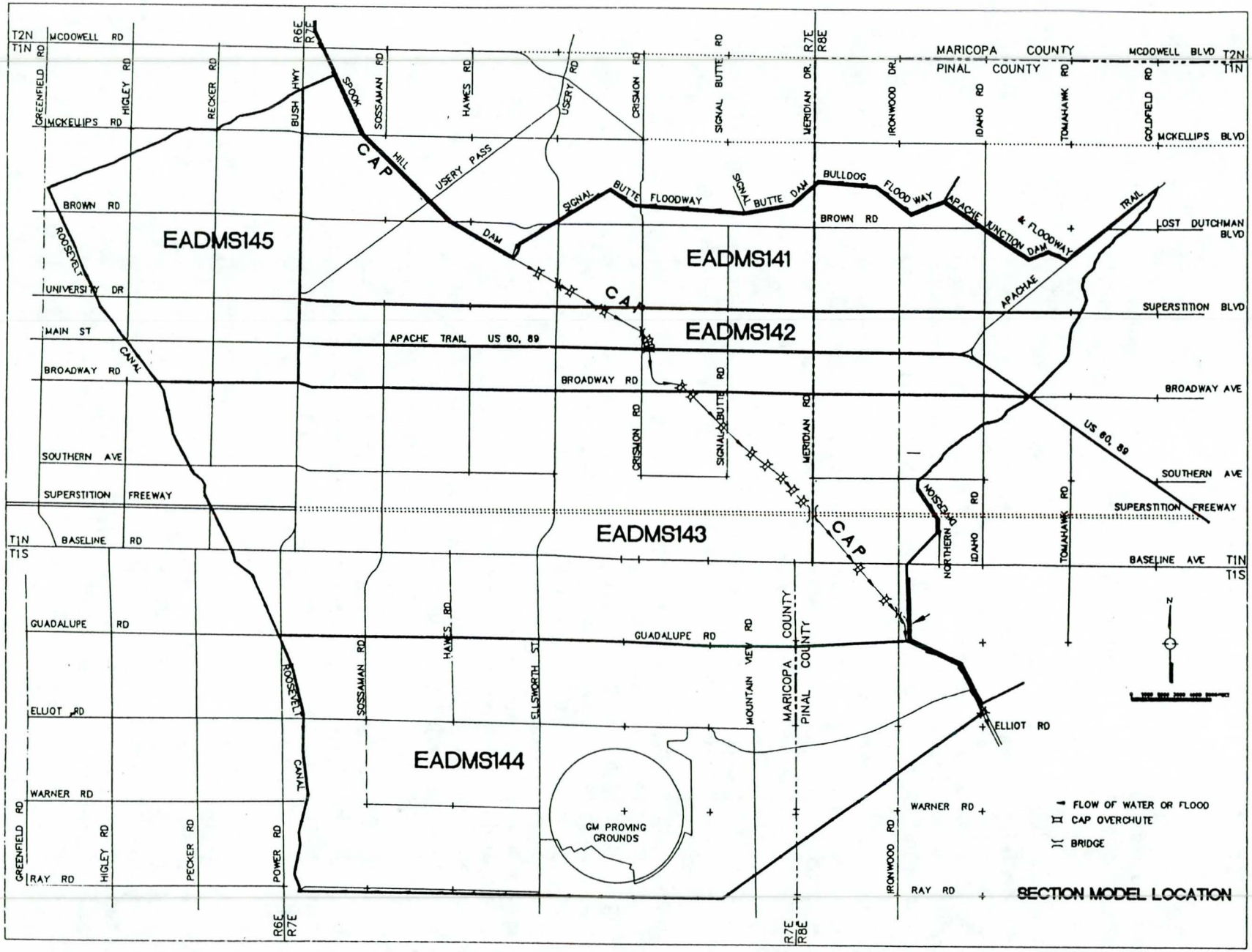

EADMS145
EADMS141
EADMS142
EADMS143
EADMS144
CAP
CAP
CAP
SPOOK HILL DAM
USERY PASS
SIGNAL BUTTE FLOODWAY
SIGNAL BUTTE DAM
BULLDOG FLOOD WAY
APACHE JUNCTION DAM & FLOODWAY
APACHE TRAIL
ROOSEVELT CANAL
ROOSEVELT CANAL
NORTHERN CANAL
APACHE TRAIL US 60, 89
US 60, 89
MARICOPA COUNTY
PINAL COUNTY
MARICOPA COUNTY
PINAL COUNTY
T2N
T1N
T1S
R6E
R7E
R8E
MCDOWELL RD
MCKELLIPS RD
BROWN RD
UNIVERSITY DR
MAIN ST
BROADWAY RD
SOUTHERN AVE
SUPERSTITION FREEWAY
BASELINE RD
GUADALUPE RD
ELLIOT RD
WARNER RD
RAY RD
GREENFIELD RD
HIGLEY RD
RECKER RD
BUSH HWY
SOSSAMAN RD
HAWES RD
USERY RD
CRISMON RD
SIGNAL BUTTE RD
MERIDIAN DR
IRONWOOD DR
IDAHO RD
TOLLAHAWK RD
GOLDFIELD RD
MCDOWELL BLVD
MCKELLIPS BLVD
LOST DUTCHMAN BLVD
SUPERSTITION BLVD
BROADWAY AVE
SOUTHERN AVE
SUPERSTITION FREEWAY
BASELINE AVE
ELLSWORTH ST
MOUNTAIN VIEW RD
GM PROVING GROUNDS
FLOW OF WATER OR FLOOD
CAP OVERCHUTE
BRIDGE
SECTION MODEL LOCATION

Plate IV

4.4.1 Superstition Freeway Comprehensive Offsite Drainage Plan

The SFCODP, developed by ADOT, was designed to control the offsite runoff from the north side of the Superstition Freeway. Runoff discharges which are generated on the north side of the freeway and reach the freeway alignment are intercepted by a channel and conveyed westward to retention basins. The retention basins are excavated below natural ground, but high berms are used on the downstream side of each basin. The retention basins attenuate the peak discharges. The basins are designed to drain within 36 hours after each event. Plate V displays the proposed Superstition Freeway off-site drainage system within the area of our study.

Tables 4.6 and 4.7 summarize the retention basin specifications provided in the SFCODP within the vicinity of the EMCADMS.

Table 4.6
Superstition Freeway Retention Basins within the EMCADMS*

Basin No. 1 Stage-Storage-Discharge Data						
Volume, acre-feet	0.0	105.1	165.9	241.3	300.0	340.0
Elevation, feet	49.5	53.2	55.3	58.0	60.0	61.0
Outflow, cfs	0.0	260.9	328.8	395.4	440.8	981.3
Basin No. 2 Stage-Storage-Discharge Data						
Volume, acre-feet	0.0	63.5	210.3	367.5	535.1	667.8
Elevation, feet	36.0	40.0	44.0	48.0	52.0	55.0
Outflow, cfs	0.0	272.1	384.8	471.2	544.1	593.0
Basin No. 3 Stage-Storage-Discharge Data						
Volume, acre-feet	0.0	68.0	189.7	314.1	617.0	650.0
Elevation, feet	56.0	58.0	61.5	65.2	74.0	75.0
Outflow, cfs	0.0	21.3	35.6	45.7	64.1	585.9
Maximum Storage Stage occurs at: Elevation = 59.22 ft. and Time = 17.00 Hr. for Basin No. 1; Elevation = 52.74 ft. and Time = 17.25 Hr. for Basin No. 2; Elevation = 72.77 ft. and Time = 27.75 Hr. for Basin No. 3						
* Information obtained using the *Final Drainage Design Report for Superstition Freeway*, Coe & Van Loo, October 1987.						

Table 4.7
Superstition Freeway Retention Basins within the EMCADMS**

Basin No. 4 Diversion Flow into the Basin			
DI	0	890.0	1090.0
QI	0	0.0	200.0
Basin No. 5 Diversion Flow into the Basin			
DI	0	1265.0	1500.0
DQ	0	0.0	235.0
Maximum Diversion into storage occurs at: QI = 200 cfs and Time = 12.75 hr. for Basins No. 4 and 5.			
** Information on Basins No. 4 and 5 was obtained using the *Superstition Freeway Comprehensive Offsite Drainage Plan*, A-N West, Inc.,February 1987.			

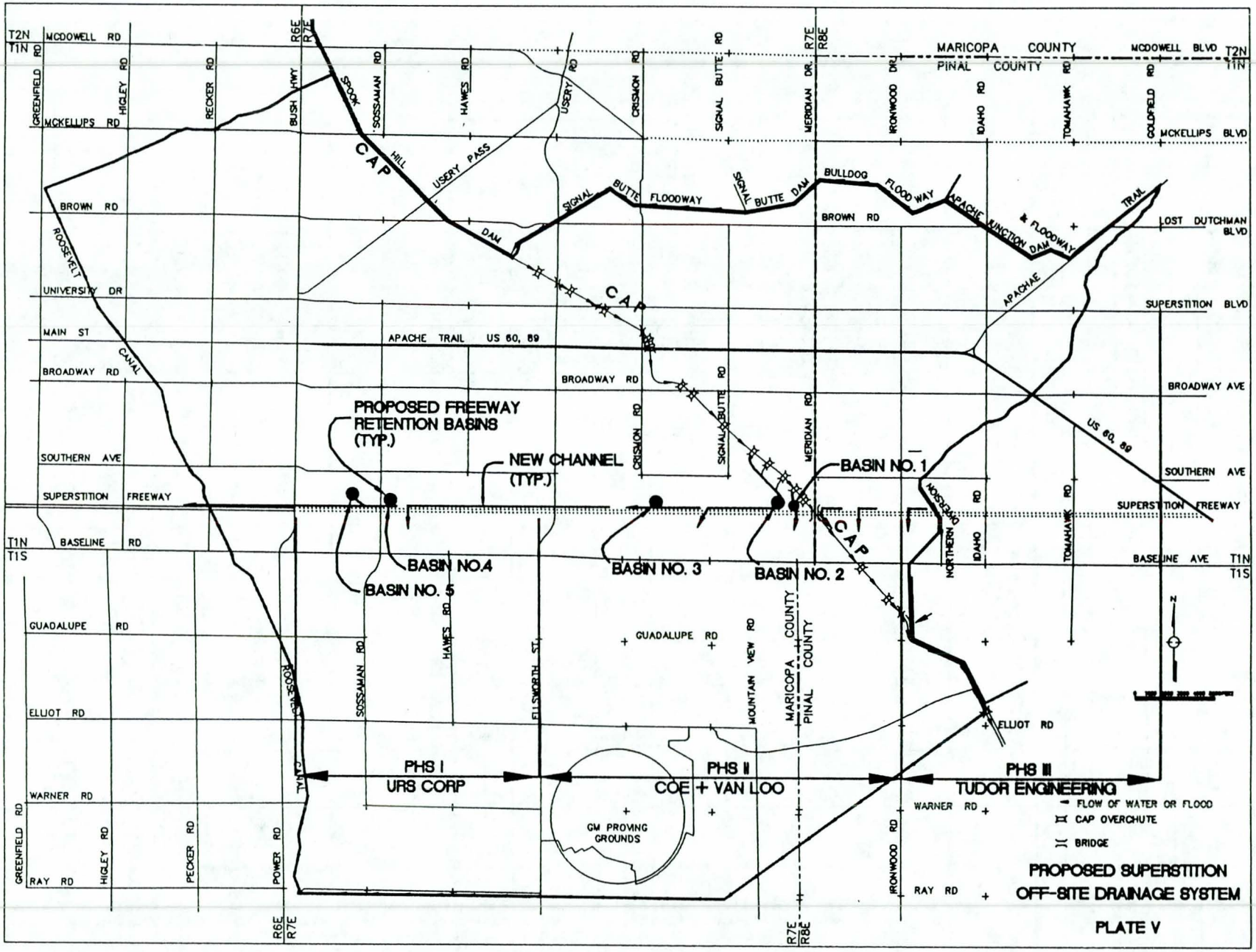

PROPOSED FREEWAY RETENTION BASINS (TYP.)
NEW CHANNEL (TYP.)
BASIN NO. 1
BASIN NO. 2
BASIN NO. 3
BASIN NO.4
BASIN NO. 5
CAP
SIGNAL BUTTE FLOODWAY
SIGNAL BUTTE DAM
BULLDOG FLOOD WAY
APACHE JUNCTION DAM & FLOODWAY
SPOOK HILL DAM
USERY PASS
APACHE TRAIL
ROOSEVELT CANAL
MARICOPA COUNTY
PINAL COUNTY
MCDOWELL RD
MCKELLIPS RD
BROWN RD
UNIVERSITY DR
MAIN ST
BROADWAY RD
SOUTHERN AVE
SUPERSTITION FREEWAY
BASELINE RD
GUADALUPE RD
ELLIOT RD
WARNER RD
RAY RD
GREENFIELD RD
HIGLEY RD
RECKER RD
POWER RD
BUSH HWY
SOSSAMAN RD
HAWES RD
USERY RD
CRISMON RD
SIGNAL BUTTE RD
MERIDIAN DR.
IRONWOOD DR.
IDAHO RD
TOMAHAWK RD
GOLDFIELD RD
MCDOWELL BLVD
MCKELLIPS BLVD
LOST DUTCHMAN BLVD
SUPERSTITION BLVD
BROADWAY AVE
SOUTHERN AVE
BASELINE AVE
US 60, 89
APACHE
NORTHERN
ELLSWORTH ST.
MOUNTAIN VIEW RD
GM PROVING GROUNDS
PHS I
URS CORP
PHS II
COE + VAN LOO
PHS III
TUDOR ENGINEERING
FLOW OF WATER OR FLOOD
CAP OVERCHUTE
BRIDGE
PROPOSED SUPERSTITION OFF-SITE DRAINAGE SYSTEM
PLATE V

Plate V

Table 4.8
Weekes Wash Breakout Rating Curve

Weekes Wash Inflow at Junction Dr, cfs	Diverted into Study Area, cfs
1000	228
3000	1024
5000	2182
6000	2767
7000	3668
9000	4716
10000	5382

4.4.2 Weekes Wash Breakout

Weekes Wash breakout enters the study area at approximately one-half mile south of Superstition Boulevard, and passes over the CAP through Overchutes No. 12 and 13. ADOT's Superstition Freeway Project handles the Weekes Wash breakout by collecting discharges from the CAP Overchutes into Detention Basins No. 1 and 2, north of the Superstition Freeway, between Meridian Drive and Signal Butte Road. Basin No. 1 is designed with a maximum capacity of 340 acre-feet, and has a 72-inch pipe as an outlet, with maximum discharge capacity of approximately 400 cfs. Basin No. 2 has an approximate capacity of 714 acre-feet, and is drained by a 72-inch pipe, with a maximum discharge of 550 cfs. Both outlet systems operate manually and are designed to slowly empty the basins within 36 hours.

Table 4.8 provides breakout rating curve information developed by the District to evaluate the Weekes Wash breakout quantity. Based on the District's Powerline study (*A Hydrologic Analysis of the Powerline FRS*, January 1989), it is estimated that the Weekes Wash breakout into EMCADMS is approximately 2,800 cfs. This maximum peak value occurs 13 hours after the start of the rain. The Weekes Wash 100-year 24-hour hydrograph developed at the breakout in *Hydrologic Analysis of the Powerline FRS* was used as input to the EADMS14 models.

4.4.3 CAP Overchutes

The results of the EADMS14 model indicate the possibility of some backwater storage at the CAP. In addition, due to the overchute blockage or lack of maintenance, the backwater potential does exist. The discrepancy at overchutes 10 through 15 between design capacity and EADMS14 might be due to the consideration of the Weekes Wash breakout by the District. The model identifies the location for potential flooding areas. Table 4.9 gives the design capacities of the CAP overchutes and the peak discharge capacities calculated by A-N West's study as well as studies performed by the District. The discharges displayed in Table 4.9 do not reflect effects of blockage or lack of maintenance. Refer to Plate II, page 4, for the locations of the CAP overchutes.

Table 4.9
Central Arizona Project Canal Overchute Structures

ID	Station No.*	Overchute Size, in.*	No. of CMP Pipes	Design Capacity, cfs*	ID No.	EMCADMS1, cfs	EADMS13, cfs	EADMS14, cfs
REACH 1								
1	345+30	54	3	230	SUB10	248	171	156
2	374+00	40'10"	Wide Flume	445	SUB12	593	449	420
3	396+00	40'10"	Wide Flume	410	SUB16	493	349	394
4	427+15	72	3	370	SUB18	677	457	562
5	429+20	72	3	370	SUB18	//	//	//
6	456+50	60	2	130	CO37	823	799	85
7	471+03	72	3	608	CO37	//	//	582
8	479+00	72	5	400	CO41	911	757	433
9	504+25	72	5	400	CO41	//	//	109
10	529+50	72	5	565	CO73	1271	1003	686
11	542+50	72	5	565	CO73	//	//	569
12	552+50	72	5	610	CO77	1839	1179	799
13	563+50	72	5	610	CO77	//	//	1520
14	574+50	54	3	251	SUB78	94	59	45
REACH 2								
15	131+90	72	2	271	CO101	1181	894	714
16	158+00	72	2	271	CO101	//	//	150

* U.S. Department of the Interior, Bureau of Reclamation, Central Arizona Project *Salt-Gila Aqueduct Reach 1* plans, last revised in February 28, 1986.

Some of the CAP overchutes are connected to each other by a channel system which is built along the upstream side of the CAP canal (see Plate II). The channel connections are used to carry the overflow from one overchute into the next one. According to the U.S. Department of Reclamation Plans, the connected overchutes are 4–5, 8–9, and 10–14.

4.4.4 Areal-Reduction Methodology

Redelineation of the interior subbasins required adjustment of some of the concentration points. The original study delineation increased or decreased the amount of peak discharges in some subbasins by simply changing the contributing areas.

The District believes that because of the size of this watershed and the nature of the rainfall point precipitation analysis that the areal-reduction methodology is most representative of this watershed. Areal-reduction methodology best serves the larger watersheds (more than ten square miles of contributing area) and, hence, has been included in the EADMS14 model. However, as other design engineers may not be comfortable with the areal-reduction methodology, the District has also

created a separate model, identical to EADMS14, but without areal-reduction. That model is distinguished as EMADMS14. Table 4.10 provides the Areal-reduction conversion ratios used by the District.

Table 4.11 provides a comparison of peak discharges at various points along the EMF using the SCS2000, EMCADMS1, EMADMS14, and EADMS14 models. Using the EMADMS14 model—without areal-reduction—there is a 21 percent reduction in peak discharge from the EMCADMS1 calculations, or a reduction from 19,634 cfs to 15,431 cfs. There is an even greater reduction, however, when the EADMS14 model is used—the peak discharge is reduced 24 percent *more* than the model without areal reduction. The EADMS14 model reduces the peak discharge calculated by the EMCADMS1 model by approximately 45 percent.

Table 4.10
Flood Control District
Areal-Reduction Conversion Ratios

Area, sq. miles	Conversion Ratio, %	Rainfall, inches
0.01	100	3.65
10	95	3.47
20	92	3.36
30	90	3.29
40	89	3.25
50	88	3.21
60	87	3.18
70	86	3.14
80	86	3.14

Table 4.11
Comparison of 100-year 24-hour Peak Discharges

Location at EMF	SCS2000, cfs	ID No.	EMCADMS1, cfs	ID No.	EMADMS14 (w/o A-R), cfs	EADMS14 (with A-R), cfs
Brown Road	1,160			EMF2	176	148
University Boulevard		RO3	990	EMF3	816	415
Apache Trail (US 60)	1,965	CO5	1,880	EMF4	2,248	1,617
Broadway Road	2,290	CO7	3,134	EMF5	4,306	3,186
Southern Avenue	3,440	CO9	2,874	EMF6	4,483	4,238
Superstition Freeway	4,720	CO27	6,281	EMF7	6,122	4,472
Baseline Road	4,700	CO29	6,029	EMF8	6,356	4,630
Guadalupe Road	4,860	CO55	8,139	EMF9	8,565	6,455
Elliot Road	5,110	CO67	11,517	EMF10	8,804	6,308
Warner Road	5,280	CO93	11,639	EMF11	8,712	6,386
Ray Road	5,890	CO111	19,634	EMF12	15,431	10,791

As Table 4.11 reveals, however, there is a large discrepancy between the peak discharges as calculated by the SCS (SCS2000) and by the District. The District compared the results as well as the watershed parameters to identify the reasons for those discrepancies and found the following items to have significant impact on the results:

a. The study area is located within one of the most rapidly growing parts of the County. Because of the urbanizing characteristic of the watershed and since the Kinematic Wave methodology is one of the most recommended techniques for routing flow through urbanized watershed areas, the District selected it for use in its study. With this theory, there is no attenuation of flood peaks which tends to increase peak discharges.

   At the beginning of this study, the District was only interested in adjusting some of the parameters in the A-N West model to keep it compatible with the original study. However, in the future the model should be revised to reflect the recommendations in the *Hydrologic Design Manual for Maricopa County*.

b. Timing is another major difference between the two studies. The SCS study calculates the velocities for more than two-thirds of the watershed area to be approximately 1.5 fps, and for the more urbanized areas the maximum velocity is about 4 fps. The SCS2000 uses these results to simulate the runoff in the year 2000. Based on this assumption, at the year 2000 the discharge runoff from the watershed area is still in the sheet flow condition with no improvements or channelization. The model does not consider the effect of channels constructed within the last few years.

   Channelization is changing the natural characteristics of the watershed today. Some of the major channels are along Bush Highway, Broadway Road, and Sossaman Road. The new channels have increased the velocities up to 10 fps in some subbasins, having an impressive impact on the discharges. This data was not available to the SCS for developing the future condition model.

c. New drainage activities such as the Superstition Freeway Drainage System and new developments have occurred in the last few years which were not considered in the SCS2000. SCS was told that all flows would pass through Superstition Freeway basically unimpeded.

d. The SCS study did not consider the Weekes Wash breakout.

e. Using the latest aerial photography and actual field information, the District has been able to delineate the watershed in more accurate subareas.

The SCS2000 model is one of the most accurate and reliable methods for modeling the study area. However, the District has access to more information on this watershed area drainage system that better describes the watershed drainage characteristics. This information was not available to the SCS for modeling the future conditions, therefore, the District believes that the EADMS14 is more representative of the east County watershed at this time.

Field investigations of the EMF revealed that the Manning roughness coefficients (Manning's N value) selected by the SCS were too high. The District reduced the

Manning's N value from 0.035, used by the SCS, to 0.025. The HEC-2 multiple profile analysis calculated that the EMF has a capacity of 8,000 cfs in the area from the Powerline Floodway to Guadalupe Road (Reach 5 of the EMF). This represents an increase of approximately 2,100 cfs over the original SCS calculation (see appendices for a result summary table for Reach 5, by SCS). This indicates a capacity for the EMF of about 36 percent more than the SCS calculated.

5 Summary and Conclusion

5.1 FCD Revised Model (EADMS13)

This study is a revision of the original Eastern Maricopa County Area Drainage Master Study which was completed by A-N West as consultants to the Flood Control District of Maricopa County in January, 1987.

The District's first revision is known as EADMS13 and concentrates on three factors which were not properly addressed in the A-N West study:

1. The CNs developed by A-N West's study did not take into account the latest developments within the area, or updated SCS curve numbers. The District calculated new CNs based on three important elements which were not available during the A-N West study:
   - The methodology suggested for calculating CNs in the June 1986 Technical Release 55 (TR-55).
   - In-depth field investigations.
   - The 1987 Landis Aerial Photos, which provided up-to-date depiction of developed areas.
2. The District developed its own storage rating curve to estimate the possibility of attenuations at CAP overchute inlets. Marginal attenuation of 100-year frequency peaks resulted when routed through stage storage at the CAP. Although other frequency storms might be somewhat more affected (see Table 4.9).
3. Areal-reduction methodology is suggested for use in large watershed areas to calculate average rainfall depth. It is also suggested to be more representative of the watershed precipitation.

Revising the EMCADMS1 based on the first two factors resulted in a 23 percent reduction in the 100-year peak discharge estimates in the EMF (EADMS12 model).

Areal-reduction led to an additional 13 percent reduction in peak discharge in the EADMS13 model. This was done using NOAA Atlas 2 curves. However, the District is aware of regional areal-reduction curves that are going through acceptance. This will further impact the calculated discharges.

EADMS13 resulted in a reduction of the discharge generated at Ray Road from 19,600 to 12,600 cfs, about a 36 percent reduction at the downstream end of this watershed.

5.2 FCD Detailed Study (EADMS14)

After *carefully* examining the EMCADMS1, the District recognized the following problems with the study:

1. The A-N West curve numbers did not appear to represent the watershed any longer.
2. The Superstition Freeway, which has a great impact on drainage in the area, was not reflected in the model.
3. The breakout from Weekes Wash into the study area was not considered.
4. The A-N West Study did not consider any attenuation at the CAP Overchutes.
5. Existing retention basins within the study area are not evaluated by the model.

Having recognized that the EADMS should be improved and updated to provide a more usable resource for the County, the District made the following revisions:

1. The model has been updated to reflect improvements in the area.
2. The latest TR-55 suggested methodology has been used for curve number selections (see Table 4.2 and appendices for calculations).
3. The model has been updated for compatibility with the Superstition Freeway drainage system (Tables 4.1 and 4.2, and Plate V display the summary results).
4. The Weekes Wash breakout during the 100-year event of approximately 2,800 cfs enters the study area, and has been modeled into EADMS14 (Table 4.8 summarizes the results).
5. The watershed has been redelineated according to our field investigations (see Plate V).
6. The Central Arizona Project Canal overchutes storage rating curves have been developed and modeled.
7. Existing major retention/detention basins have been modeled.

8. Based on Apache Trail (U.S. 60/89) as-built plans, existing culverts have been located within the watershed. A summary table for the Apache Trail drainage structures is provided in the appendix.

9. The areal-reduction methodology has been used to compute average-rainfall depth ratios for this watershed.

10. The velocities developed by the HEC-1 model were examined by the District and the results are within acceptable range. (See appendix for the calculations.)

11. The District's HEC-2 model for the EMF indicates the Floodway capacity is approximately 8,000 cfs in the vicinity of Ray Road. This exceeds the SCS design estimate by nearly 2,100 cfs. A larger capacity was assumed (9,000 cfs) in developing the flood hydrograph to be used in the Queen Creek ADMS.

The final product has solved some of the problems the District has encountered since this study was initiated. The model considers the latest drainage development within the area and is compatible with most development drainage plans. This study is able to locate the major washes and drainage structures, and approximate drainage conditions.

EADMS14 is designed based on existing conditions. At present, most of the jurisdictions within the watershed are requiring that new developers retain the excess discharge from nearly 3 inches of rainfall. This requirement will help to reduce the future condition peak discharge rainfall. For this reason, the District assumes that the existing drainage/flooding conditions are the worst case, and future development will help to alleviate some of east Maricopa County's flooding problems by constructing more retention/detention basins within that area.

Our modeling has recognized the construction of the University Drive and Bush Highway detention basin (by SRP). This new basin should reduce some of the drainage problems at the intersection of Bush Highway and Apache Trail, downstream of the basin.

The Superstition Freeway drainage features will greatly improve drainage conditions in the area. However, the freeway basins are only minimizing flood problems south of the freeway and do not have any effect north of the freeway.

Due to the several existing Golf courses to the north of Apache Trail and the retention basins provided in the area, the peak discharge calculated by EADMS14 model is lower than the SCS2000. This result is displayed in the Table 5.1.

The major discrepancy between the District and the SCS studies is caused by the changes in the characteristics of the East County watershed. The new information was not available to the SCS at the time of modeling (specifically, channelization in the area which has converted the sheet flow types of runoff into the concentrated types of flow).

Table 5.1 summarizes the results of the District's modeling computations. The areal-reduction methodology is also reflected in this table.

Table 5.1
Comparison of 100-year 24-hour Peak Discharges

Location at EMF	SCS2000, cfs	EMADMS1, cfs	FCD Studies the Existing Condition	
			EADMS13, cfs	EADMS14, cfs
Brown Road	1,160			148
University Boulevard		990	521	415
Apache Trail (US 60)	1,965	1,880	1,234	1,617
Broadway Road	2,290	3,134	2,770	3,186
Southern Avenue	3,440	2,874	3,063	4,238
Superstition Freeway	4,720	6,281	4,747	4,472
Baseline Road	4,700	6,029	4,766	4,630
Guadalupe Road	4,860	8,139	6,404	6,271
Elliot Road	5,110	11,517	8,397	6,308
Warner Road	5,280	11,639	10,815	6,386
Ray Road	5,890	19,634	12,637	10,791

6

Recommendations

The Flood Control District's detailed model of the east Maricopa County study area, EADMS14, is a multipurpose model. It is a unique way to develop a plan to locate problem areas and keep track of drainage within a watershed. The study could lead to consistency in the hydrology used in drainage design and maintain the continuity of local drainage systems. It provides an overview of drainage for the entire watershed area, by which we can monitor the adverse effects of individual development on specific critical locations on the watershed. EADMS14 can be a very powerful tool in the hands of engineers and jurisdictions in their management of flooding problems.

The following recommendations are suggested to improve the accuracy and usage of the District's revised model:

1. EADMS14 can be a very effective tool in a design and comparison review. However, using this tool effectively and properly requires a good overall understanding of the model and the way it works. The Flood Control District should continue to support this model for County users and other jurisdictions.

2. EADMS14 should consistently be updated to reflect methodology suggested in the Flood Control District's *Hydrologic Design Manual for Maricopa County* (specifically in an undeveloped part of the watershed where Kinematic Wave methodology is not recommended), as well as changes in the study area. Updates should be completed on an annual basis and new versions should be made available to all users. This will require cooperation from all involved jurisdictions to keep the District informed of on-going development.

3. Some large existing basins within the watershed area have been modeled. The District has estimated the size of existing retention basins for its modeling. The storage capacity of existing basins should be measured accurately for future revisions of the model.

4. New freeways are currently being designed and constructed. They can have significant impact on drainage. The effects of future freeway construction will need to be addressed in EADMS14.

5. The EADMS14 model should be revised to reflect the effects of the proposed freeway basins along the Superstition Freeway, showing the actual capacity of the freeway basins, based on as-built plans.

6. The model is designed based on proposed Superstition Freeway placement and operation. Therefore, approximate peak discharges have been computed for the south side of the freeway and should only be used prior to the completion of freeway off-site drainage system construction, with a full understanding of the interim flooding impacts.

7. Since the actual capacity of the East Maricopa Floodway does not meet the required peak discharge capacities, the floodway capacity for Reach 6 needs to be evaluated to determine the diversion locations and quantity of the diverted flows. The Floodplain Management Branch of the Flood Control District should consider a detailed floodplain study of the facility.

8. District field investigations reveal that some CAP overchute capacities do not meet the peak discharge conveyance required. Also, due to drainage inlet blockage or lack of cleaning and maintenance of overchutes, the actual capacity for the drainage structures may be somewhat reduced. The District recommends that a factor of safety be considered for design purposes to accommodate the possibility of having some backwater storage at the overchutes due to the debris and blockage. This safety factor can be adjusted by jurisdictions or design engineers based on location, condition, size of the overchutes, and normal cleaning of the facilities.

9. EADMS14 is designed based on our field investigations, hydraulic and hydrologic assumptions, and scientific methods of calculation. The scientific methodology and assumptions always carry some degree of error. Prior to using any value, the design engineer should independtly verify and accept the peak discharges generated by this model. Furthermore, a safety factor based on the recommendations in Table 5.1 should be considered for design of drainage culverts, pipes, and channels to account for the high sediment loads and the uncertainty of channel stability in a distributary flow system. This factor of safety can be adjusted by the design engineer because of location, sediment condition, or the size of the drainage structure.

Table 6.1
Recommended Safety Factor

Discharge, cfs		Recommended Safety Factor	Comments
From	To		
0	500	1.5	N/A
501	1000	1.4	But not less than 750 cfs
1001	4000	1.2	But not less than 1400 cfs
4001	and up	1.1	But not less than 4800 cfs

10. For the areal-reduction methodology, the District used the *NOAA Atlas 2, Precipitation-Frequency Atlas of the Western United States*, Volume VIII-Arizona, 1973, by the U.S. Department of Commerce, National Weather Service. However, the District is preparing the *Hydrologic Design Manual for Maricopa County*. This manual suggests a new procedure for areal-reduction calculation. The Flood Control District should revise the model based on the methodology suggested in the *Hydrologic Design Manual for Maricopa County* .

11. For the 100-year event, there will be some attenuation on the upstream side of some CAP overchutes. The drainage system designed for the CAP connects some of the overchutes to each other by using collecting channels. The summary table identifies some attenuation behind overchutes which may never actually occur because the excess discharges can be carried along the channels to the next overchute. The Flood Control District should conduct a study in this area to evaluate the capacities of these channels and the severity of flooding problems at the CAP inlet locations.

12. The Special Projects Branch of the Flood Control District is conducting a dam break analysis for Powerline FRS at this time. The study evaluates the structure capacity and performs the dam break analysis for the emergency conditions. The same type of study should be done for the Buckhorn-Mesa structures, and the results incorporated into EADMS14 (to insure the adequacy of 100-year protection by structures or the amount of overflows entering this watershed during the 100-year events) for management planning.

13. The GM Proving Grounds Levee along the south side of Elliot Road (between Ellsworth Street and Mountain View Road), is conveying all washes that originally flowed in a southwesterly direction to intercept Elliot Road in a channel parallel to Elliot Road, carrying all discharges along the Channel into the intersection of Elliot Road and Ellsworth Street. Combining all the washes at this location produces some flooding problems within the watershed, southwest of the intersection. The discharge from this intersection creates flooding problems which damage the neighboring area. The District may need to consider constructing a basin at this location that may solve some of the EMF capacity problems and may also provide protection to the area.

14. The HEC-1 program provides a variety of methods for calculating peak discharge. However, the suggested methods for computing peak runoff are somewhat suspect for use on small areas. Future efforts of this type should maintain a minimum subwatershed size of 80 acres. For site specification design for basins smaller than 80 acres the designer may wish to consider other methodology (rational or TR-55 method of calculations) to determine the peak discharges.

15. A complex, highly detailed study such as the EADMS14 requires a significant amount of time to design. The Flood Control District should only pursue detailed studies such as EADMS14 following an evaluation of the usefulness of this tool to the jurisdictions involved as well as to the District.

16. The AN-West east county alternative plans should be revised based on the revised EADMS14 model. Each drainage alternative should be isolated from the rest of the system for evaluation. The District should reevaluate the necessary cost/benefit ratio and consider the construction of the alternative structures for improving the local drainage problems and also the EMF 100-year event protection.

17. The flood improvement structures in the east County watershed may improve some of the local flooding problems, however, it may have an adverse effect downstream of the watershed or the EMF (because of hydrograph timing variances). All models which are computing the peak discharges for the contributing watershed areas along the EMF should be connected to each other for developing a unique overall model that can evaluate the entire watershed as well as the EMF overall performances against new structures and new developments.

References

Eastern Maricopa County Area Drainage Master Study, A-N West, Inc., January, 1987.

Final Drainage Design Report for Superstition Freeway (SR 360), Ellsworth Road to Ironwood Drive, Coe & Van Loo Consulting Engineers, Inc., October, 1987.

Final Environmental Impact Statement Buckhorn-Mesa Watershed, U.S. Department of Agriculture, Soil Conservation Service, June, 1976.

HEC-1 Flood Hydrology Package User Manual, U.S. Army Corps of Engineers, September 1981.

HEC-2 Water Surface Profile User Manual, US. Army Corps of Engineers, September 1982.

A Hydrologic Analysis of the Powerline F.R.S., Flood Control District of Maricopa County, January 1989.

NOAA Atlas 2, Precipitation-Frequency Atlas of the Western United States, Volume VIII-Arizona, U.S. Department of Commerce, National Weather Service, 1973.

Preliminary Drainage Report for Superstition Freeway (SR 360), Power Road to Ellsworth Road, URS Corporation, November, 1987.

Superstition Freeway Comprehensive Offsite Drainage Plan, A-N West, Inc., February, 1987.

Urban Hydrology for Small Watersheds, Technical Release 55 (TR-55), U.S. Department of Agriculture, Soil Conservation Service, June 1986.

Appendix A

EADMS14
Model Output

```
1    ****************************************          ****************************************
     *                                      *          *                                      *
     *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *          *    U.S. ARMY CORPS OF ENGINEERS      *
     *            FEBRUARY 1981             *          *  THE HYDROLOGIC ENGINEERING CENTER   *
     *          REVISED  6 FEB 87           *          *          609 SECOND STREET           *
     *                                      *          *       DAVIS, CALIFORNIA 95616        *
     *  RUN DATE  01/29/1990  TIME  15:35:23 *          *  (916) 440-3285 OR (FTS) 448-3285    *
     *                                      *          *                                      *
     ****************************************          ****************************************
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X     X  XXXXXXX   XXXXX          X
X     X  X       X     X        XX
X     X  X       X              X
XXXXXXX  XXXX    X       XXXXX  X
X     X  X       X              X
X     X  X       X     X        X
X     X  XXXXXXX   XXXXX        XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

1 HEC-1 INPUT PAGE 1

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

   1          ID       EASTERN  MARICOPA COUNTY MASTER DRAINAGE PLAN       DATA FILE: EADMS14.DAT
   2          ID
   3          ID       EAST COUNTY HIGH RESOLUTION MODEL.
   4          ID
   5          ID       SPECIFICATIONS:  THIS MODEL REPRESENTS THE EXISTING CONDITION OF THE
   6          ID                        WATERSHED.
   7          ID                        TOTAL DRAINAGE AREA IS APPROXIMATELY 68 SQ. ML.
   8          ID                        100-YEAR FREQUENCY, 24-HOUR DURATION
   9          ID
  10          ID       METHODOLOGY:     THE US CORPS OF ENGINEERS FLOOD HYDROLOGY MODEL HEC-1
  11          ID                        DATED FEB. 1981, 1985 REVIDION
  12          ID                        SCS TYPE II RAINFALL DISTRIBUTION
  13          ID                        SCS RUNOFF CURVE NUMBER METHOD TR-55, JUNE 1986
  14          ID                        KINEMATIC WAVE PROCEDURE WAS USED FOR OVERLAND FLOW
  15          ID                        AND ROUTING TECHNIQES.
  16          ID                        APPROXIMATE DIRECTION, LOCATION, AND LENGTH OF THE
  17          ID                        WASHES HAVE BEEN EVALUATED BASED ON OUR FIELD
  18          ID                        INVESTIGATION, U.S.G.S. MAPS, LANDIS AERIAL SURVEYS
  19          ID                        DATED DECEMBER 1987.
                                        THE NOAA TECHNICAL MEMORANDUM NWS HYDRO-40 DEPTH AREA RATIOS
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*DIAGRAM
IT      15                      120
IO       5
IN      30
JD    3.65    0.01
PC       0   0.005   0.011   0.016   0.022   0.028   0.035   0.041   0.048   0.056
PC   0.063   0.071   0.080   0.089   0.098   0.109   0.120   0.133   0.147   0.163
PC   0.181   0.204   0.235   0.283   0.663   0.735   0.772   0.799   0.820   0.838
PC   0.854   0.868   0.880   0.891   0.902   0.912   0.921   0.929   0.937   0.945
PC   0.952   0.959   0.965   0.972   0.978   0.984   0.989   0.995   1.000   1.000
JD    3.47      10
JD    3.36      20
JD    3.29      30
JD    3.25      40
JD    3.21      50
JD    3.18      60
JD    3.14      70
JD    3.14      80

KK   S1004
KM        RUNOFF FROM SUBBASIN S1004
BA   0.062
LS             83
UK     250   .0095   0.200     100
RK    1400  0.0139   0.040           TRAP     3.0     2.0

KK   R1005
KM        ROUTE FLOWS FROM S1004 TO C1009
RK    1200  0.0057   0.025           TRAP     3.0     2.0     YES

KK   S1008
KM        RUNOFF FROM SUBBASIN S1008
BA   0.048
LS             83
UK     600  0.0095   0.200     100
RK    1700  0.0139   0.040           TRAP     3.0     2.0
```

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

  52          KK   C1009
  53          KM        COMBINE FLOWS FROM S1008 AND R1005
  54          HC       2

  55          KK   R1011
  56          KM        ROUTE FLOWS FROM C1009 TO C1021
  57          RK    1600  0.0095   0.025            TRAP     5.0     2.0     YES

  58          KK   S1012
  59          KM        RUNOFF FROM SUBBASIN S1012
  60          BA   0.062
  61          LS             77
  62          UK     600  0.0096   0.200     100
  63          RK    1800  0.0139   0.040            TRAP     3.0     2.0

  64          KK   R1013
  65          KM        ROUTE FLOWS FROM S1012 TO C1017
  66          RK    1300  0.0057   0.025            TRAP     3.0     2.0     YES

  67          KK   S1016
  68          KM        RUNOFF FROM SUBBASIN S1016
  69          BA    .036
  70          LS             77
  71          UK     600   .0095    .200     100
  72          RK    2400   .0139    .040            TRAP       3       2

  73          KK   C1017
  74          KM        COMBINE FLOWS FROM R1013 AND S1016
  75          HC       2

  76          KK   R1019
  77          KM        ROUTE FLOWS FROM C1017 TO C1021
  78          RK    1400   .0057    .025            TRAP       5       2     YES

  79          KK   C1021
  80          KM        COMBINE FLOWS FROM R1013 AND R1011 AT BUSH HWY. & MCKELLIPS, C1021
  81          HC       2

  82          KK  DV1023
  83          KM        DIVERT 100% OF FLOWS THROUGH MCKELLIPS RD. TO THE WEST TO C3003
  84          DT   D1023
  85          DI       0     100     200     300     400     500    1000
  86          DQ       0     100     200     300     400     500    1000

  87          KK   S1024
  88          KM        RUNOFF FROM SUBBASIN S1024
  89          BA    .093
  90          LS             77
  91          UK     600   .0095    .200     100
  92          RK    2000   .0139    .040            TRAP       3       2
```

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

 93           KK   R1025
 94           KM        ROUTE FLOWS FROM S1024 TO C1029
 95           RK    1000   .0057    .025            TRAP       5       2     YES

 96           KK   S1028
 97           KM        RUNOFF FROM SUBBASIN S1028
 98           BA    .065
 99           LS              83
100           UK     600   .0095    .200     100
101           RK    1300   .0139    .040            TRAP       5       3

102           KK   C1029
103           KM        COMBINE FLOWS FROM S1028 AND R1025 AT BUSH HWY
104           HC       3

105           KK  DV1031
106           KM        DIVERT 75% OF FLOWS ACROSS BUSH HWY. TO R3027
107           DT   D1031
108           DI       0     100     200     300     400     500
109           DQ       0      75     150     225     300     375

110           KK   R1033
111           KM        ROUTE FLOWS FROM DV1031 TO C1035
112           RK    1600   .0085    .025            TRAP       5       2     YES

113           KK   S1034
114           KM        RUNOFF FROM SUBBASIN S1034
115           BA    .065
116           LS              85
117           UK     200   .0095    .200     100
118           RK    2200   .0139    .040            TRAP       5       3

119           KK   C1035
120           KM        COMBINE FLOWS FROM S1034 AND R1033 AT BUSH HWY.
121           HC       2

122           KK  DV1037
123           KM        DIVERT 85% OF FLOWS ACROSS BUSH HWY TO R3047
124           DT   D1037
125           DI       0     100     200     300     500    1000
126           DQ       0      85     170     255     425     850

127           KK   R1039
128           KM        ROUTE FLOWS FROM DV1037 TO C1041
129           RK     800  0.0085    .025            TRAP       5       2     YES

130           KK   S1040
131           KM        RUNOFF FROM SUBBASIN S1040
132           BA    .043
133           LS              77
134           UK     600   .0096    .200     100
135           RK    1700   .0139    .040            TRAP       5       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 136          KK   C1041
 137          KM        COMBINE FLOWS FROM S1040 AND R1039
 138          HC       2

 139          KK  DV1043
 140          KM        DIVERT 95% OF FLOWS ACROSS BUSH HWY. TO R3049
 141          DT   D1043
 142          DI       0     100     200     300     400     500
 143          DQ       0      95     190     285     380     475

 144          KK   R1045
 145          KM        ROUTE FLOWS FROM DV1043 TO C1047
 146          RK     800   .0085    .025            TRAP       5       2     YES

 147          KK   S1046
 148          KM        RUNOFF FROM SUBBASIN S1046
 149          BA    .115
 150          LS              80
 151          UK     700   .0095    .200     100
 152          RK    3700   .0139     .04            TRAP       5       3

 153          KK   C1047
 154          KM        COMBINE FLOWS FROM S1046 AND R1045
 155          HC       2

 156          KK  DV1049
 157          KM        DIVERT 75% OF FLOWS ACROSS BUSH HWY TO R3053
 158          DT   D1049
 159          DI       0     100     200     300     500    1000
 160          DQ       0      75     150     275     375     750

 161          KK   R1051
 162          KM        ROUTE FLOWS FROM D1049 TO C1053
 163          RK     800   .0085    .025            TRAP       5       2     YES

 164          KK   S1052
 165          KM        RUNOFF FROM SUBBASIN S1052
 166          BA     .21
 167          LS              80
 168          UK     700   .0095    .200     100
 169          RK    4200   .0139     .04            TRAP       5       3

 170          KK   C1053
 171          KM        COMBINE FLOWS FROM S1052 AND R1051
 172          HC       2

 173          KK  DV1055
 174          KM        DIVERT 100% OF FLOWS ACROSS BUSH HWY TO R3055
 175          DT   D1055
 176          DI       0     100     200     300     500    1000
 177          DQ       0     100     200     300     500    1000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  178         KK   S1056
  179         KM        RUNOFF FROM SUBBASIN S0156
  180         BA     .12
  181         LS              77
  182         UK     700   .0095    .200     100
  183         RK    3400   .0139     .04           TRAP      5       3

  184         KK  DV1057
  185         KM        DIVERT 100% OF FLOW W. ACROSS BUSH HWY. TO R3207
  186         DT   D1057
  187         DI       0      10  100000
  188         DQ       0       1       1

  189         KK   R1059
  190         KM        ROUTE FLOWS FROM DV1057 TO C1065
  191         RK    3000   .0094    .025           TRAP      5       2     YES

  192         KK   S1060
  193         KM        RUNOFF FROM SUBBASIN S1060
  194         BA     .16
  195         LS              85
  196         UK     700   .0095    .200     100
  197         RK    4000   .0139     .04           TRAP      5       2

  198         KK   B1061
  199         KM        ROUTE THROUGH RETENTION BASIN B1061 AT NORTH SIDE OF BROWN RD. V=2
  200         DT   B1061       2
  201         DI       0      10   10000
  202         DQ       0       1       1

  203         KK   R1063
  204         KM        ROUTE OUTFLOWS FROM RETENTION BASIN B1061 TO C1065
  205         RK    5200   .0095     .04           TRAP      5       3     YES

  206         KK   S1064
  207         KM        RUNOFF FROM SUBBASIN S1064
  208         BA     .42
  209         LS              79
  210         UK     300   .0076    .200     100
  211         RK    4300   .0125     .04           TRAP      5       2

  212         KK   C1065
  213         KM        COMBINE FLOWS FROM S1064,R1059, AND R1063
  214         HC       3

  215         KK  DV1067
  216         KM        DIVERT 100% OF FLOWS ACROSS BUSH HWY TO R3215 (REVISED TO SHOW NEW CHAN)
  217         DT   D1067
  218         DI       0      10    2000
  219         DQ       0       1       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  220         KK   R1069
  221         KM        ROUTE FLOWS FROM DV1067 TO C1071
  222         RK     900   .0085     .04            TRAP       5       3     YES

  223         KK   S1070
  224         KM        RUNOFF FROM SUBBASIN S1070
  225         BA    .048
  226         LS              77
  227         UK     600   .0076    .200     100
  228         RK    3300   .0125     .04            TRAP       5       2

  229         KK   C1071
  230         KM        COMBINE FLOWS FROM S1070 AND R1069
  231         HC       2

  232         KK  DV1073
  233         KM        DIVERT 100% OF FLOWS ACROSS BUSH HWY TO R3217 (REVISED TO SHOW NEW CHN)
  234         DT   D1073
  235         DI       0       1    2000
  236         DQ       0       1       1

  237         KK   R1075
  238         KM        ROUTE FLOWS FROM DV1073 TO C1077
  239         RK    1000   .0085    .025            TRAP       5       3     YES

  240         KK   C1077
  241         KM        COMBINE FLOWS FROM R1075 AND DV1055
  242         HC       2

  243         KK   S1078
  244         KM        RUNOFF FROM SUBBASIN S1078
  245         BA     .15
  246         LS              84
  247         UK     200   .0095    .200     100
  248         RK    3000   .0139     .04            TRAP       1      15

  249         KK   B1079
  250         KM        ROUTE THROUGH RETENTION BASIN B1079 NORTH OF BROWN RD. V=2 AC.FT.
  251         DT   B1079       2
  252         DI       0      10   10000
  253         DQ       0       1       1

  254         KK   S1080
  255         KM        RUNOFF FROM SUBBASIN S1080
  256         BA    .068
  257         LS              79
  258         UK     200   .0104    .200     100
  259         RK    2600   .0139     .04            TRAP       1      15
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 260          KK   R1081
 261          KM        ROUTE FLOWS FROM S1080 TO C1087
 262          RK     700   .0104    .025            TRAP       1      15     YES

 263          KK   S1084
 264          KM        RUNOFF FROM S1084
 265          BA    .038
 266          LS              77
 267          UK     600   .0104    .200     100
 268          RK    1700   .0139     .04            TRAP       5       2

 269          KK   R1085
 270          KM        ROUTE FLOWS FROM S1084 TO C1087
 271          RK    1300   .0104    .025            TRAP       1      15     YES

 272          KK   C1087
 273          KM        COMBINE FLOWS FROM B1079, R1081, AND R1085
 274          HC       3

 275          KK   R1089
 276          KM        ROUTE FLOWS FROM C1087 TO C1091
 277          RK    6600   .0125    .025            TRAP       5       2     YES

 278          KK   S1090
 279          KM        RUNOFF FROM SUBBASIN S1090
 280          BA     .31
 281          LS              77
 282          UK     500   .0076     .20     100
 283          RK    7000   .0125     .04            TRAP       5       2

 284          KK   C1091
 285          KM        COMBINE FLOWS FROM S1090 AND R1089
 286          HC       2

 287          KK   S1094
 288          KM        RUNOFF FROM SUBBASIN S1094
 289          BA     .15
 290          LS              77
 291          UK     500   .0076    .200     100
 292          RK    5400   .0141    .050            TRAP       5       2

 293          KK  DV1095
 294          KM        DIVERT 25% OF FLOWS ACROSS UNIVERSITY RD. TO R2361
 295          DT   D1095
 296          DI       0     100     200     300     500    1000
 297          DQ       0      25      50      75     125     250

 298          KK   R1097
 299          KM        ROUTE FLOWS FROM DV1095 TO C1099
 300          RK     900   .0076    .050            TRAP       5       2     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 301          KK   S1098
 302          KM        RUNOFF FROM SUBBASIN S1098
 303          BA     .17
 304          LS              77
 305          UK     500   .0076    .200     100
 306          RK    5900   .0141    .050            TRAP       5       2

 307          KK   C1099
 308          KM        COMBINE FLOWS FROM S1098 AND R1097
 309          HC       2

 310          KK  DV1101
 311          KM        DIVERT 75% OF FLOWS ACROSS UNIVERSITY RD. TO R2369
 312          DT   D1101
 313          DI       0     100     200     300     500    1000
 314          DQ       0      75     150     225     375     750

 315          KK   R1103
 316          KM        ROUTE FLOWS FROM DV1101 TO C1105
 317          RK    1300   .0076    .050           TRAP       5       3     YES

 318          KK   S1104
 319          KM        RUNOFF FROM SUBBASIN S1104
 320          BA     .20
 321          LS              77
 322          UK     600   .0076    .200     100
 323          RK    6400   .0141    .050            TRAP       5       2

 324          KK   C1105
 325          KM        COMBINE FLOW FROM S1104 AND R1103
 326          HC       2

 327          KK  DV1107
 328          KM        DIVERT 75% OF FLOWS ACROSS UNIVERSITY RD. TO R2387
 329          DT   D1107
 330          DI       0     100     200     300     500    1000
 331          DQ       0      75     150     225     375     750

 332          KK   R1109
 333          KM        ROUTE FLOW FROM DV1107 TO C1113
 334          RK    1100   .0076    .050            TRAP       5       3     YES

 335          KK   S1110
 336          KM        RUNOFF FROM SUBBASIN S1110
 337          BA    .064
 338          LS              78
 339          UK     400   .0104    .200     100
 340          RK    1400   .0139     .04            TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  341         KK   R1111
  342         KM        ROUTE FLOW FROM S1110 TO C1113
  343         RK    6400   .0141     .04            TRAP       5       2     YES

  344         KK   S1112
  345         KM        RUNOFF FROM SUBBASIN S1112
  346         BA    .436
  347         LS              77
  348         UK     800   .0076    .200     100
  349         RK    7400   .0130     .04            TRAP       5       2

  350         KK   C1113
  351         KM        COMBINE FLOWS FROM S1112, R1111, AND R1109
  352         HC       3

  353         KK  DV1115
  354         KM        DIVERT 75% OF FLOWS ACROSS UNIVERSITY RD. TO R2405
  355         DT   D1115
  356         DI       0     100     200     300     500    1000
  357         DQ       0      75     150     225     375     750

  358         KK   R1117
  359         KM        ROUTE FLOW FROM DV1115 TO C1119
  360         RK    1100   .0076    .050            TRAP       5       3     YES

  361         KK   S1118
  362         KM        RUNOFF FROM SUBBASIN S1118
  363         BA     .09
  364         LS              77
  365         UK     500   .0076    .200     100
  366         RK    4000   .0145     .04            TRAP       5       2

  367         KK   C1119
  368         KM        COMBINE FLOWS FROM S1118 AND R1117
  369         HC       2

  370         KK  DV1121
  371         KM        DIVERT 50% OF FLOWS ACROSS UNIVERSITY RD. TO R2407
  372         DT   D1121
  373         DI       0     100     200     300     500    1000
  374         DQ       0      50     100     150     250     500

  375         KK   R1123
  376         KM        ROUTE FLOW FROM DV1121 TO C1125 IN A CONC. CHANNEL
  377         RK    1800   .0076     .02            TRAP      20       0

  378         KK   C1125
  379         KM        COMBINE FLOWS FROM C1091 AND R1123
  380         HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 381          KK   B1127
 382          KM        ROUTE THROUGH THE RETENTION BASIN AT THE CORNER OF BUSH HWY & UNIV. RD
 383          RS       1    ELEV       0
 384          SV       0      25    25.1    25.2    25.3    25.4
 385          SQ       0     .01     100     200     300     400
 386          SE       0       2     2.1     2.2     2.3     2.4

 387          KK   C1129
 388          KM        COMBINE FLOWS FROM C1077 AND OVERFLOW FROM THE RETENTION BASIN (B1127)
 389          KM        AT BUSH & UNIVERSITY RD.
 390          HC       2

 391          KK  DV1131
 392          KM        DIVERT 1% OF FLOWS THROUGH UNIVERSITY RD. TO WEST TO 3219
 393          KM        AND 99% THROUGH BUSH HWY TO THE SOUTH ( TO SHOW THE NEW CHANNEL)
 394          DT   D1131
 395          DI       0       1    2000
 396          DQ       0       1       1

 397          KK   S1132
 398          KM        RUNOFF FROM SUBBASIN S1132
 399          BA    .309
 400          LS              85
 401          UK     600   .0076    .015     100
 402          RK    3000   .0141     .02    0.50    TRAP       1      15
 403          RK    2000   .0141    .035            TRAP      20       2

 404          KK   B1133
 405          KM        ROUTE THROUGH THE RETENTION BASIN IN M.H. PARK AT NORTHSIDE OF UNIV. RD
 406          RS       1    STOR       0
 407          SV       0       2     2.1
 408          SQ       0    0.01     500
 409          SE       0       1     1.1

 410          KK  DV1135
 411          KM        DIVERT 75% OF FLOWS ACROSS UNIVERSITY RD. TO R2333
 412          DT   D1135
 413          DI       0     100     200     300     500    1000
 414          DQ       0      75     150     225     375     750

 415          KK   R1137
 416          KM        ROUTE FLOW FROM DV1135 TO C1139
 417          RK     800   .0076     .04            TRAP       5       2     YES

 418          KK   S1138
 419          KM        RUNOFF FROM SUBBASIN S1138
 420          BA    .061
 421          LS              78
 422          UK     500   .0076     .20     100
 423          RK    1900   .0141     .04            TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 424          KK   C1139
 425          KM        COMBINE FLOWS FROM R1137 AND S1138
 426          HC       2

 427          KK  DV1141
 428          KM        DIVERT 50% OF FLOWS ACROSS UNIVERSITY RD. TO C2335
 429          DT   D1141
 430          DI       0     100     200     300     500    1000
 431          DQ       0      50     100     150     250     500

 432          KK   R1143
 433          KM        ROUTE FLOW FROM DV1141 TO C1145
 434          RK    1900   .0076     .02           TRAP       5       2     YES

 435          KK   S1144
 436          KM        RUNOFF FROM SUBBASIN S1144
 437          BA    .186
 438          LS              77
 439          UK     800   .0076     .20     100
 440          RK    4400   .0141     .04           TRAP       5       2

 441          KK   C1145
 442          KM        COMBINE FLOWS FROM S1144 AND R1143
 443          HC       2

 444          KK  DV1147
 445          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO R2353
 446          DT   D1147
 447          DI       0     100     200     300     500    1000
 448          DQ       0     100     200     300     500    1000

 449          KK   S1148
 450          KM        RUNOFF FROM SUBBASIN S1148
 451          BA    .236
 452          LS              78
 453          UK     400   .0076    .200     100
 454          RK    4200   .0145     .04           TRAP       2       4
 455          RK    1000   .0042    .035           TRAP       8     1.5

 456          KK   S1150
 457          KM        RUNOFF FROM SUBBASIN S1150
 458          BA     .18
 459          LS              78
 460          UK     500   .0076    .200     100
 461          RK    6500   .0145     .04           TRAP       2       4
 462          RK     800   .0042    .035           TRAP       8     1.5

 463          KK   C1151
 464          KM        COMBINE FLOWS FROM S1148 AND S1150
 465          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 466          KK   B1153
 467          KM        ROUTE HYDROGRAPH THROUGH RETENTION BASIN AT OVERCHUTE #1, ASSUM.
 468          RS       1    ELEV   67.11
 469          SV       0   0.150   0.370   0.600   0.820   1.300    1.79
 470          SQ       0       0      45      91     137     170     202
 471          SE   67.11      68    68.7    69.3      70    70.4    70.8

 472          KK   R1155
 473          KM        ROUTE HYDROGRAPH FROM NORTH OF CAP TO SOUTH THROUGH 3-48" PIPE
 474          RK     120   .0035    .015            CIRC     6.9             YES

 475          KK   R1157
 476          KM        ROUTE FLOW FROM R1155 TO C1159
 477          RK    2600   .0145     .04            TRAP       2       4     YES

 478          KK   S1158
 479          KM        RUNOFF FROM SUBBASIN S1158
 480          BA    .138
 481          LS              78
 482          UK     400   .0076    .200     100
 483          RK    2300   .0132     .03            TRAP       1      15

 484          KK   C1159
 485          KM        COMBINE FLOWS FROM R1157 AND S1158
 486          HC       2

 487          KK  DV1161
 488          KM        DIVERT 100% OF FLOW ACROSS UNIVERSITY RD. TO R2299
 489          DT   D1161
 490          DI       0     100     200     300     500    1000
 491          DQ       0     100     200     300     500    1000

 492          KK   S1162
 493          KM         RUNOFF FROM SUBBASIN S1162
 494          BA    .025
 495          LS              77
 496          UK     300   .0076    .200     100
 497          RK    1200   .0132     .03            TRAP       5       2

 498          KK   R1163
 499          KM        ROUTE FROM S1162 TO C1165
 500          RK     600  .00760    .030            TRAP       5       2     YES

 501          KK   S1164
 502          KM        RUNOFF FROM SUBBASIN S1164
 503          BA    .037
 504          LS              77
 505          UK     400   .0076    .200     100
 506          RK    1400   .0132     .03            TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 507          KK   C1165
 508          KM        COMBINE FLOWS FROM R1163 AND S1164
 509          HC       2

 510          KK  DV1167
 511          KM        DIVERT 100% OF FLOW ACROSS UNIVERSITY RD. TO R2281
 512          DT   D1167
 513          DI       0     100     200     300     500    1000
 514          DQ       0     100     200     300     500    1000

 515          KK   S1168
 516          KM        RUNOFF FROM SUBBASIN S1168
 517          BA    .212
 518          LS              80
 519          UK     500   .0076    .200     100
 520          RK    3800   .0156    .040      50    TRAP       2       4
 521          RK    3000   .0156    .035            TRAP       5       3

 522          KK   R1169
 523          KM        ROUTE FROM S1168 TO C1171
 524          RK    1100   .0076    .035            TRAP       8     1.5     YES

 525          KK   S1170
 526          KM        RUNOFF FROM SUBBASIN S1170
 527          BA     .73
 528          LS              82
 529          UK     500   .0076    .200     100
 530          RK    4500   .0156    .040    0.21    TRAP       5       3
 531          RK    2200   .0156     .02            TRAP       1      15

 532          KK   C1171
 533          KM        COMBINE FLOW FROM S1170 AND R1169
 534          HC       2

 535          KK   B1173
 536          KM        ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #2, ASSUMMED VOL.
 537          DT   B1173    0.55
 538          DI       0      10   10000
 539          DQ       0       1       1

 540          KK   R1175
 541          KM        ROUTE HYDROGRAPH FROM NORTH OF CAP TO SOUTH THROUGH 4-68" X 9 BOX CULV.
 542          RK     120   .0035    .013            TRAP      22       0     YES

 543          KK   R1177
 544          KM        ROUTE FLOW FROM OVERCHUTE #2 TO C1179
 545          RK     800   .0076     .04            TRAP       5       2     YES

 546          KK   S1178
 547          KM        RUNOFF FROM SUBBASIN S1178
 548          BA    .041
 549          LS              77
 550          UK     400   .0076    .200     100
 551          RK     800   .0156     .04            TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 552          KK   C1179
 553          KM        COMBINE FLOWS FROM S1178 AND R1177
 554          HC       2

 555          KK  DV1181
 556          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO R2279
 557          DT   D1181
 558          DI       0     100     200     300     500    1000
 559          DQ       0     100     200     300     500    1000

 560          KK   C1183
 561          KM        ************** COMBINE FLOWS AT UNIVERSITY RD. AND BUSH HWY. **********
 562          HC       5

 563          KK   S1184
 564          KM        RUNOFF FROM SUBBASIN S1184
 565          BA     .67
 566          LS              80
 567          UK     600   .0150    .200     100
 568          RK    7200   .0156    .040           TRAP       2       4

 569          KK  DV1185
 570          KM        DIVERT 100% OF FLOW ACROSS UNIVERRSITY RD. TO R2261
 571          DT   D1185
 572          DI       0     100     200     300     500    1000
 573          DQ       0     100     200     300     500    1000

 574          KK   S1186
 575          KM        RUNOFF FROM SUBBASIN S1186
 576          BA    .504
 577          LS              77
 578          UK     500   .0047    .200     100
 579          RK    7200   .0135     .04           TRAP       2       4

 580          KK  DV1187
 581          KM        DIVERT 100% OF FLOW ACROSS UNIVERSITY RD. TO R2219
 582          DT   D1187
 583          DI       0     100     200     300     500    1000
 584          DQ       0     100     200     300     500    1000

 585          KK   S1190
 586          KM        RUNOFF FROM SUBBASIN S1190
 587          BA    .110
 588          LS              79
 589          UK     400   .0047    .200     100
 590          RK    3000   .0135     .04           TRAP       2       4

 591          KK  DV1191
 592          KM        DIVERT 100% OF FLOW ACROSS UNIVERSITY RD. TO R2217
 593          DT   D1191
 594          DI       0     100     200     300     500    1000
 595          DQ       0     100     200     300     500    1000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 596          KK   S1194
 597          KM        RUNOFF FROM SUBBASIN S1194
 598          BA    .502
 599          LS              78
 600          UK     500   .0090    .200     100
 601          RK    3400   .0089     .04      20    TRAP     5       4
 602          RK    5600   .0089    .035           TRAP    20       3

 603          KK   R1195
 604          KM        ROUTE FLOW FROM S1194 TO C1199
 605          RK    2400   .0135    .035           TRAP     5       4     YES

 606          KK   S1198
 607          KM        RUNOFF FROM SUBBASIN S1198
 608          BA    .451
 609          LS              78
 610          UK     500   .0047    .200     100
 611          RK    6500   .0135     .04           TRAP     5       4

 612          KK   C1199
 613          KM        COMBINE FLOWS FROM S1198 AND R1195
 614          HC       2

 615          KK  DV1201
 616          KM        DIVERT 100% OF FLOW ACROSS THE UNIVERSITY DR. TO R2215
 617          DT   D1201
 618          DI       0     100     200     300     500    1000
 619          DQ       0     100     200     300     500    1000

 620          KK   C1203
 621          KM        ********* COMBINE FLOWS AT UNIVERSITY RD. AND BUSH HWY. *******
 622          HC       5

 623          KK   S1204
 624          KM        RUNOFF FROM SUBBASIN S1204
 625          BA    .138
 626          LS              77
 627          UK     400   .0076    .200     100
 628          RK    3600   .0076    .040           TRAP     2       4

 629          KK   R1205
 630          KM        ROUTE FLOW FROM S1204 TO C1217
 631          RK    5800   .0076    .040           TRAP    10       3     YES

 632          KK   S1208
 633          KM        RUNOFF FROM SUBBASIN S1208
 634          BA     .30
 635          LS              78
 636          UK     400   .0076    .200     100
 637          RK    4900   .0096    .040           TRAP     2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  638         KK   R1209
  639         KM        ROUTE FLOW FROM S1208 TO C1217
  640         RK    5200   .0089    .040            TRAP      10       3     YES

  641         KK   S1212
  642         KM        RUNOFF FROM SUBBASIN S1212
  643         BA    .156
  644         LS              78
  645         UK     500   .0100    .200     100
  646         RK    3400   .0096    .040            TRAP       2       4

  647         KK   R1213
  648         KM        ROUTE FLOW FROM S1212 TO C1217
  649         RK    4400   .0089    .040            TRAP      10       3     YES

  650         KK   S1216
  651         KM        RUNOFF FROM SUBBASIN S1216
  652         BA    .436
  653         LS              77
  654         UK     600   .0057    .200     100
  655         RK    3600   .0089    .040    0.22    TRAP       2       4
  656         RK    1900   .0089    .040            TRAP      10       3

  657         KK   C1217
  658         KM        COMBINE FLOWS FROM R1205, R1209, R1213, AND S1216
  659         HC       4

  660         KK   S1220
  661         KM        RUNOFF FROM SUBBASIN S1220
  662         BA    .237
  663         LS              77
  664         UK     600   .0114    .200     100
  665         RK    4400   .0104    .040            TRAP       2       4

  666         KK   R1221
  667         KM        ROUTE FLOW FROM S1220 TO C1225
  668         RK    7400   .0096    .040            TRAP       2       4     YES

  669         KK   S1224
  670         KM        RUNOFF FROM SUBBASIN S1224
  671         BA    .536
  672         LS              78
  673         UK     500   .0114    .200     100
  674         RK    6000   .0096    .040            TRAP       2       4
  675         RK    4000   .0096    .035            TRAP      10       3

  676         KK   C1225
  677         KM        COMBINE RUNOFF FROM S1224 AND R1221
  678         HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 679          KK  DV1227
 680          KM        DIVERT 75% OF FLOW ACROSS UNIVERSITY RD. TO R2133
 681          DT   D1227
 682          DI       0     100     200     300     500    1000
 683          DQ       0      75     150     225     375     750

 684          KK   R1229
 685          KM        ROUTE FLOW FROM DV1227 TO C1231
 686          RK    2100   .0057     .04            TRAP       5       3     YES

 687          KK   C1231
 688          KM        COMBINE FLOWS FROM R1229 AND C1217
 689          HC       2

 690          KK  DV1233
 691          KM        DIVERT 100% OF FLOW ACROSS UNIVERSITY RD. TO R2169
 692          DT   D1233
 693          DI       0      50     100     200     300
 694          DQ       0      50     100     200     300

 695          KK   S1234
 696          KM        RUNOFF FROM S1234
 697          BA    .219
 698          LS              83
 699          UK     500   .0057    .200     100
 700          RK    3500   .0089    .040            TRAP       2       4

 701          KK  DV1235
 702          KM        DIVERT 100% OF FLOW ACROSS UNIVERSITY RD. TO DV2171
 703          DT   D1235
 704          DI       0     100     200     300     500    1000
 705          DQ       0     100     200     300     500    1000

 706          KK   S1238
 707          KM        RUNOFF FROM SUBBASIN S1238
 708          BA    .205
 709          LS              78
 710          UK     400   .0114    .200     100
 711          RK    7600   .0104    .040            TRAP       2       4

 712          KK  DV1239
 713          KM        DIVERT 50% OF FLOWS ACROSS UNIVERSITY RD. TO R2097
 714          DT   D1239
 715          DI       0     100     200     300     500    1000
 716          DQ       0      50     100     150     250     500

 717          KK   R1241
 718          KM        ROUTE FLOW FROM DV1239 TO C1243
 719          RK    1400   .0104     .03            TRAP       5       3     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 720          KK   S1242
 721          KM        RUNOFF FROM SUBBASIN S1242
 722          BA   .3530
 723          LS             78
 724          UK    600   .0114    .200     100
 725          RK   8400   .0104    .040            TRAP       2       4

 726          KK   C1243
 727          KM        COMBINE FLOWS FROM S1242 AND R1241
 728          HC       2

 729          KK  DV1245
 730          KM        DIVERT 50% OF FLOWS ACROSS UNIVERSITY RD. TO R2099
 731          DT   D1245
 732          DI       0     100     200     300     500    1000
 733          DQ       0      50     100     150     250     500

 734          KK   R1247
 735          KM        ROUTE FLOW FROM DV1245 TO C1249
 736          RK   1800   .0100    .030            TRAP       5       3     YES

 737          KK   S1248
 738          KM        RUNOFF FROM SUBBASIN S1248
 739          BA    .190
 740          LS             79
 741          UK    400   .0089    .200     100
 742          RK   1800   .0100    .040            TRAP       2       4

 743          KK   C1249
 744          KM        COMBINE FLOWS FROM S1248 AND R1247
 745          HC       2

 746          KK  DV1251
 747          KM        DIVERT 25% OF FLOWS ACROSS UNIVERSITY RD. TO R2105
 748          DT   D1251
 749          DI       0     100     200     300     500    1000
 750          DQ       0      25      50      75     125     250

 751          KK   R1253
 752          KM        ROUTE FLOW FROM DV1251 TO C1255
 753          RK   1800   .0100    .030            TRAP       5       3     YES

 754          KK   S1254
 755          KM        RUNOFF FROM SUBBASIN S1254
 756          BA    .164
 757          LS             79
 758          UK    600   .0080    .200     100
 759          RK   5600   .0096    .040            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 760          KK   C1255
 761          KM        COMBINE FLOWS FROM S1254 AND R1253
 762          HC       2

 763          KK  DV1257
 764          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO R2117
 765          DT   D1257
 766          DI       0     100     200     300     500    1000
 767          DQ       0     100     200     300     500    1000

 768          KK   S1258
 769          KM        RUNOFF FROM SUBBASIN S1258
 770          BA    .223
 771          LS              78
 772          UK     500   .0076    .200     100
 773          RK    6400   .0089    .040            TRAP       2       4

 774          KK   S1260
 775          KM        RUNOFF FROM SUBBASIN S1260
 776          BA    .063
 777          LS              78
 778          UK     200   .0080    .200     100
 779          RK    2800   .0105    .040            TRAP       2       4

 780          KK   R1261
 781          KM        ROUTE S1260 TO C1265
 782          RK    1300   .0089    .040            TRAP       2       4     YES

 783          KK   S1264
 784          KM        RUNOFF FROM SUBBASIN S1264
 785          BA    .298
 786          LS              78
 787          UK     500   .0076    .200     100
 788          RK    3800   .0105    .040            TRAP       2       4

 789          KK   C1265
 790          KM        COMBINE FLOWS FROM S1264 AND R1261
 791          HC       2

 792          KK  DV1267
 793          KM        DIVERT 50% OF FLOWS ACROSS UNIVERSITY RD. TO R2067
 794          DT   D1267
 795          DI       0     100     200     300     500    1000
 796          DQ       0      50     100     150     250     500

 797          KK   R1269
 798          KM        ROUTE DV1267 TO C1271
 799          RK    1400   .0089    .040            TRAP       2       4     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 800          KK   C1271
 801          KM        COMBINE FLOWS FROM R1269 AND S1258
 802          HC       2

 803          KK  DV1273
 804          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO R2079
 805          DT   D1273
 806          DI       0     100     200     300     500    1000
 807          DQ       0     100     200     300     500    1000

 808          KK   C1275
 809          KM         ********* COMBINE FLOWS AT UNIVERSITY RD. & BUSH HWY. ********
 810          HC       5

 811          KK   S1276
 812          KM        RUNOFF FROM SUBBASIN S1276
 813          BA    .145
 814          LS              77
 815          UK     400   .0076    .200     100
 816          RK    5000   .0109    .040            TRAP       2       4

 817          KK  DV1277
 818          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO R2055
 819          DT   D1277
 820          DI       0     100     200     300     500    1000
 821          DQ       0     100     200     300     500    1000

 822          KK   S1278
 823          KM        RUNOFF FROM SUBBASIN S1278
 824          BA    .129
 825          LS              77
 826          UK     500   .0076    .200     100
 827          RK    3800   .0109    .040            TRAP       2       4

 828          KK  DV1279
 829          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO DV2032
 830          DT   D1279
 831          DI       0     100     200     300     500    1000
 832          DQ       0     100     200     300     500    1000

 833          KK   S1282
 834          KM        RUNOFF FROM SUBBASIN S1282
 835          BA    .443
 836          LS              77
 837          UK     600   .0076    .200     100
 838          RK   10400   .0125    .040            TRAP       2       4

 839          KK  DV1283
 840          KM        DIVERT 100% OF FLOWS ACROSS UNIVERSITY RD. TO R2019
 841          DT   D1283
 842          DI       0     100     200     300     500    1000
 843          DQ       0     100     200     300     500    1000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 844          KK   C1285
 845          KM        ******* COMBINE FLOWS AT UNIVERSITY RD. AND BUSH HWY. *******
 846          HC       4

 847          KK   R2001
 848          KM        ROUTE C1285 FROM BUSH & UNIVERSITY TO BUSH & APACHE TRAIL (C2005)
 849          KM        AT STR. 1 , ALONG BUSH HWY.
 850          RK    2650   .0057   0.035            TRAP      10       2     YES

 851          KK   S2004
 852          KM        RUNOFF FROM SUBBASIN S2004
 853          BA    0.11
 854          LS              77
 855          UK     600   .0063   0.200     100
 856          RK    2400   .0130   0.040            TRAP       2      20

 857          KK   C2005
 858          KM        COMBINE R2001 AND S2004 AT STR. 1, AT APACHE TRAIL & BUSH HWY
 859          HC       2

 860          KK   R2007
 861          KM        ROUTE C2005 TO C2417 AT BROADWAY RD. & BUSH HWY.
 862          RK    2600  0.0057   0.035            TRAP      10       3     YES

 863          KK   H2008
 864          KM        BREAKOUT FLOW FROM WEEKES WASH
 865          BA    4.53
 866          IN      10                     200
 867          QI       0       0       0       0       0       0       0       0       0       0
 868          QI       0       0       0       0       0       0       0       0       0       0
 869          QI       0       0       0       0       0       0       0       0       0       0
 870          QI       0       0       0       0       0       0       0       0       0       0
 871          QI       0       0       0       0       0       0       1       1       1       1
 872          QI       2       2       2       3       4       5       6       7       9      11
 873          QI      13      16      19      22      26      31      36      43      53      64
 874          QI      91     156     319     467     549     869    1572    2346    2776    2742
 875          QI    2349    1750    1139     779     572     447     368     308     258     219
 876          QI     196     178     163     151     141     134     128     123     119     115
 877          QI     112     102     107     106     104     102      99      96      93      91
 878          QI      89      88      86      83      81      78      76      74      74      73
 879          QI      72      71      71      70      68      66      63      60      58      57
 880          QI      56      55      55      55      55      55      55      56      58      58
 881          QI      58      59      62      65      65      63      58      51      42      32
 882          QI      22      14       8       5       2       1       1       0       0       0
 883          QI       0       0       0       0       0       0       0       0       0       0
 884          QI       0       0       0       0       0       0       0       0       0       0
 885          QI       0       0       0       0       0       0       0       0       0       0
 886          QI       0       0       0       0       0       0       0       0       0       0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 887          KK   R2009
 888          KM        ROUTE WEEKES WASH BREAKOUT FLOWS (H2008) TO US60 (C2013)
 889          RK    6500    0.01   0.065            TRAP      25      30

 890          KK   S2012
 891          KM        RUNOFF FROM SUBBASIN S2012
 892          BA     .22
 893          LS              82
 894          UK     600   .0076    .200     100
 895          RK    5400   .0133    .040            TRAP      15       3

 896          KK   C2013
 897          KM        COMBINE S2012 WITH WEEKES WASH BREAKOUT (R2009)
 898          HC       2

 899          KK   R2015
 900          KM        ROUTE FLOWS FROM C2013 TO C2029
 901          RK    2000   .0076    .040            TRAP      15       3     YES

 902          KK   S2016
 903          KM        RUNOFF FROM SUBBASIN S2016
 904          BA     .42
 905          LS              78
 906          UK     600   .0076    .200     100
 907          RK    8400   .0133    .040            TRAP      15       3

 908          KK   R2017
 909          KM        ROUTE FLOWS FROM S2016 TO C2029
 910          RK    1700   .0133    .040            TRAP      15       3     YES

 911          KK   D1283
 912          KM        D1283 RETURNED TO SYSTEM
 913          DR   D1283

 914          KK   R2019
 915          KM        ROUTE FLOWS FROM D1283 TO C2023
 916          RK    4200   .0133    .040            TRAP      15       3     YES

 917          KK   S2022
 918          KM        RUNOFF FROM SUBBASIN S2022
 919          BA     .18
 920          LS              78
 921          UK    1100   .0076    .200     100
 922          RK    3600   .0133    .040            TRAP      15       3

 923          KK   C2023
 924          KM        COMBINE FLOWS FROM S2022 AND R2019
 925          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 926          KK  DV2025
 927          KM        DIVERT 75% OF FLOWS INTO SUBBASIN S2037
 928          KM        ROUTE FLOWS THROUGH 4'X3'BOX CULVERT AT STA. 849+50
 929          KM        ADOT PROJECT NO. F0022-3(13) STR.45
 930          DT   D2025
 931          DI       0      25      50      75     100     125     150     200
 932          DQ       0      19      68      56      75      94     112     150

 933          KK   R2027
 934          KM        ROUTE FLOWS FROM DV2025 TO C2029
 935          RK    2000   .0133    .040            TRAP       2       4     YES

 936          KK   S2028
 937          KM        RUNOFF FROM SUBBASIN S2028
 938          BA    .099
 939          LS              81
 940          UK     400   .0076    .200     100
 941          RK    1200   .0133    .040            TRAP       2       4

 942          KK   C2029
 943          KM        COMBINE FLOWS FROM S2028, R2027, R2017, AND R2015
 944          HC       4

 945          KK  DV2030
 946          KM        DIVERT 100% OF FLOWS ACROSS BROADWAY AVE.TO DV4001
 947          DT   D2030
 948          DI      50     100     150     200     250     300     350     400     450
 949          DQ      50     100     150     200     250     300     350     400     450

 950          KK   D2025
 951          KM        75% OF FLOWS FROM SUBBASIN C2023 ENTERS INTO SUBBASIN S2037 THRU STR. 44
 952          KM        FROM ADOT PROJECT NO. F022-3(13), STA. 844+91, 6'X4' X 190' BOX CULVERT
 953          DR   D2025

 954          KK   R2031
 955          KM        ROUTE FLOWS FROM STR. 44 AT HYW 60 (D2025) TO C2038
 956          RK    2600   .0115    .040            TRAP       2       4     YES

 957          KK   D1279
 958          KM        FLOW FROM SUBBASIN S1278 RETURNED TO SYSTEM
 959          DR   D1279

 960          KK  DV2032
 961          KM        DIVERT 25% OF FLOWS TO R2047
 962          DT   D2032
 963          DI       0      50     100     150     200     250     300
 964          DQ       0      12      25      38      50      62      75

 965          KK   R2033
 966          KM        ROUTE TO STR. 42 & 43 (C2035)
 967          RK    4200   .0115    .040            TRAP       2       4     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  968         KK   S2034
  969         KM        RUNOFF FROM SUBBASIN S2034
  970         BA    .103
  971         LS              78
  972         UK     400   .0076    .200     100
  973         RK    3800   .0133    .040            TRAP      2       4

  974         KK   C2035
  975         KM        COMBINE SUBBASIN S2034 AND R2033
  976         HC       2

  977         KK   R2036
  978         KM        ROUTE FLOWS FROM STR. 42 & 43 (C2035) TO C2038
  979         RK    2600   .0115    .040            TRAP      2       4     YES

  980         KK   S2037
  981         KM        RUNOFF FROM SUBBASIN S2037
  982         BA     .11
  983         LS              86
  984         UK     500   .0085    .200     100
  985         RK    2600   .0115    .040            TRAP      2       4

  986         KK   C2038
  987         KM        COMBINE DV2030, R2031, R2036, AND S2037
  988         HC       4

  989         KK  DV2039
  990         KM        100% OF FLOW S. ACROSS BROADWAY RD. TO R4049
  991         DT   D2039
  992         DI       0   10000
  993         DQ       0   10000

  994         KK   S2040
  995         KM        RUNOFF FROM SUBBASIN S2040
  996         BA    .042
  997         LS              86
  998         UK     100   .0085    .200     100
  999         RK     200   .0115    .040            TRAP      2       4

 1000         KK   C2041
 1001         KM        COMBINE S2040 AND DV2039
 1002         HC       2

 1003         KK  DV2043
 1004         KM        DIVERT 100% OF FLOWS OUT TO R4055
 1005         DT   D2043
 1006         DI       0   10000
 1007         DQ       0   10000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1008          KK   D2032
1009          KM        FLOW FROM D2032 RETURNED TO SYSTEM
1010          DR   D2032

1011          KK   R2047
1012          KM        ROUTE FROM D2032 TO C2049
1013          RK    2600   .0133    .040            TRAP       2       4     YES

1014          KK   S2048
1015          KM        RUNOFF FROM SUBBASIN S2048
1016          BA    .033
1017          LS              77
1018          UK     200   .0076    .200     100
1019          RK    2400   .0133    .040            TRAP       2       4

1020          KK   C2049
1021          KM        COMBINE S2048 AND R2047
1022          HC       2

1023          KK   R2051
1024          KM        ROUTE FROM C2049 TO STR. 41 (C2057)
1025          RK    2000   .0115    .040            TRAP       2       4     YES

1026          KK   D1277
1027          KM        D1277 RETURNED INTO SYSTEM
1028          DR   D1277

1029          KK   R2055
1030          KM        ROUTE D1277 TO STR. 41 (C2057)
1031          RK    3700   .0115    .040            TRAP       2       4     YES

1032          KK   S2056
1033          KM        RUNOFF FROM SUBBASIN S2056
1034          BA    .042
1035          LS              83
1036          UK     800   .0089    .200     100
1037          RK    3900   .0115    .040            TRAP       2       4

1038          KK   C2057
1039          KM        COMBINE S2056, R2055, AND R2051 AT STR. 41
1040          HC       3

1041          KK   R2059
1042          KM        ROUTE FROM STR. 41 (C2057) TO C2076
1043          RK    3700   .0115    .040            TRAP       2       4     YES

1044          KK   S2060
1045          KM        RUNOFF FROM SUBBASIN S2060
1046          BA    .086
1047          LS              82
1048          UK     800   .0085    .200     100
1049          RK    2800   .0115    .040    .009    TRAP       2       4
1050          RK     800   .0115    .015            TRAP       3       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1051          KK   C2061
1052          KM        COMBINE S2060, R2059, AND DV2043
1053          HC       3

1054          KK  DV2063
1055          KM        DIVERT 100% OF FLOWS S. ACROSS BROADWAY RD. TO R4057
1056          DT   D2063
1057          DI       0      50     100     150     200     250     300
1058          DQ       0      50     100     150     200     250     300

1059          KK   S2064
1060          KM        RUNOFF FROM SUBBASIN S2064
1061          BA     .15
1062          LS              85
1063          UK     800   .0089    .200     100
1064          RK    5000   .0115    .040            TRAP       2       4

1065          KK   R2065
1066          KM        ROUTE FROM STR. 39 AND 40 (S2064) TO C2075
1067          RK    3400   .0115    .040            TRAP       2       4     YES

1068          KK   D1267
1069          KM        RETRIEVE DIVERTED HYDROGRAPH D1267
1070          DR   D1267

1071          KK   R2067
1072          KM        ROUTE D1267 TO STR. 38 (C2071)
1073          RK    3700   .0115    .040            TRAP       2       4     YES

1074          KK   S2070
1075          KM        RUNOFF FROM SUBBASIN S2070
1076          BA    .098
1077          LS              83
1078          UK     400   .0089    .200     100
1079          RK    3700   .0115    .040            TRAP       2       4

1080          KK   C2071
1081          KM        COMBINE S2070 AND R2067 AT STR. 38 (C2071)
1082          HC       2

1083          KK   R2073
1084          KM        ROUTE C2071 AT SYR. 38 TO C2075
1085          RK    3400   .0115    .040            TRAP       2       4     YES

1086          KK   S2074
1087          KM        RUNOFF FROM SUBBASIN S2074
1088          BA     .22
1089          LS              84
1090          UK     600   .0085    .200     100
1091          RK    3000   .0115    .040            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1092          KK   C2075
1093          KM        COMBINE FLOWS FROM S2074, R2073, AND R2065
1094          HC       4

1095          KK  DV2076
1096          KM        DIVERT 85% ACROSS THE BROADWAY INTO A M.H.P. TO R4063
1097          DT   D2076
1098          DI       0      50     100     150     200     250     300     350
1099          DQ       0      42      85     128     170     212     255     298

1100          KK   R2077
1101          KM        ROUTE HYDROGRAPH ALONG BROADWAY RD.
1102          RK    2600  0.0050  0.0025            TRAP      10       3

1103          KK   D1273
1104          KM        RETRIEVE DIVERTED HYDROGRAPH D1273
1105          DR   D1273

1106          KK   R2079
1107          KM        ROUTE D1273 THROUGH SUBBASIN S2080 TO STR. 36 (C2081)
1108          RK    3400   .0114    .040            TRAP       2       4     YES

1109          KK   S2080
1110          KM        RUNOFF FROM SUBASIN S2080
1111          BA     .11
1112          LS              85
1113          UK     400   .0100    .200     100
1114          RK    3400   .0114    .040            TRAP       2       4

1115          KK   C2081
1116          KM        COMBINE S2080 AND R2079 AT STR. 36 (C2081)
1117          HC       2

1118          KK   R2083
1119          KM        ROUTE C2081 FROM STR. 36 TO C2093
1120          RK    3000   .0114    .040            TRAP       2       4     YES

1121          KK   S2084
1122          KM        RUNOFF FROM SUBBASIN S2084
1123          BA    .079
1124          LS              83
1125          UK     100   .0089    .200     100
1126          RK    3400   .0115    .040            TRAP       2       4

1127          KK   R2085
1128          KM        ROUTE S2084 FROM STR. 37 TO C2093
1129          RK    2700   .0114    .040            TRAP       2       4     YES
1130          RK    2200   .0114    .020            TRAP       2       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1131          KK   S2088
1132          KM        RUNOFF FROM SUBBASIN S2088
1133          BA    .075
1134          LS              85
1135          UK     800   .0100    .200     100
1136          RK    4000   .0115    .040           TRAP       2       4

1137          KK   R2089
1138          KM        ROUTE S2088 FROM STR. 35 TO C2093
1139          RK    2600   .0114    .040           TRAP       2       4     YES

1140          KK   S2092
1141          KM        RUNOFF FROM SUBBASIN S2092
1142          BA     .25
1143          LS              86
1144          UK     500   .0076    .200     100
1145          RK    4800   .0114    .040           TRAP       2       4

1146          KK   C2093
1147          KM        COMBINE FLOWS FROM S2092, R2089, R2085, R2083, AND DV2077
1148          HC       5

1149          KK  DV2095
1150          KM        DIVERT 100% OF FLOWS S. ACROSS BROADWAY RD.TO R4071
1151          DT   D2095
1152          DI       0  100000
1153          DQ       0  100000

1154          KK   D1239
1155          KM        RETRIEVE DIVERTED HYDROGRAPH D1239
1156          DR   D1239

1157          KK   R2097
1158          KM        ROUTE D1239 TO STR. 34 (C2101)
1159          RK    4000   .0114    .040           TRAP       2       4     YES

1160          KK   D1245
1161          KM        FLOW FROM D1245 RETURNED TO SYSTEM
1162          DR   D1245

1163          KK   R2099
1164          KM        ROUTE D1245 TO STR. 34 (C2101)
1165          RK    3000   .0114    .040           TRAP       2       4     YES

1166          KK   S2100
1167          KM        RUNOFF FROM SUBBASIN S2100
1168          BA     .10
1169          LS              85
1170          UK     200   .0076    .200     100
1171          RK    3800   .0114    .040           TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1172          KK   C2101
1173          KM        COMBINE S2100, R2099, AND R2097 AT STR. 34 (C2101)
1174          HC       3

1175          KK   R2103
1176          KM        ROUTE C2101 FROM STR. 34 TO C2111
1177          RK    4900   .0114    .040            TRAP       2       4     YES

1178          KK   D1251
1179          KM        FLOWS FROM D1251 RETURNED TO SYSTEM
1180          DR   D1251

1181          KK   R2105
1182          KM        ROUTE D1251 THROUGH SUBBASIN S2106 TO STRS. 32 AND 33 (C2107)
1183          RK    2800    .012    .040            TRAP       2       4     YES
1184          RK    2800    .012    .040

1185          KK   S2106
1186          KM        RUNOFF FROM SUBBASIN S2106
1187          BA   .0124
1188          LS             82
1189          UK     200   .0076    .200     100
1190          RK    4000   .0114    .040            TRAP       2       4

1191          KK   C2107
1192          KM        COMBINE S2106 AND R2105 AT STR. 32 AND 33 (C2107)
1193          HC       2

1194          KK   R2109
1195          KM        ROUTE C2107 THROUGH SUBBASIN S2110 TO C2111
1196          RK    4300   .0114    .040            TRAP       1       4     YES

1197          KK   S2110
1198          KM        RUNOFF FROM SUBBASIN S2110
1199          BA     .25
1200          LS             84
1201          UK     300   .0076    .200     100
1202          RK    5000   .0114    .040            TRAP       2       4

1203          KK   C2111
1204          KM        COMBINE S2110, R2109, AND R2103
1205          HC       4

1206          KK  DV2112
1207          KM        DIVERT 70% ACROSS BROADWAY RD. TO DV4133
1208          DT   D2112
1209          DI       0      10     100   10000
1210          DQ       0       7      70    7000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1211          KK   R2113
1212          KM        ROUTE HYDROGRAPH ALONG BROADWAY RD.
1213          RK    2600  0.0057   0.025          TRAP      10       3

1214          KK   S2114
1215          KM        RUNOFF FROM SUBBASIN S2114
1216          BA    .096
1217          LS              84
1218          UK     200   .0100    .200     100
1219          RK    4000   .0114    .040           TRAP       2       4

1220          KK   R2115
1221          KM        ROUTE S2114 FROM STR. 31 TO C2129
1222          RK    4800    .012    .040           TRAP       2       4     YES

1223          KK   D1257
1224          KM        FLOWS FROM D1257 RETURNED TO SYSTEM
1225          DR   D1257

1226          KK   R2117
1227          KM        ROUTE D1257 THROUGH SUBBASIN S2120 TO STR. 30 (C2121)
1228          RK    3200   .0107    .040           TRAP       2       4     YES

1229          KK   S2120
1230          KM        RUNOFF FROM SUBBASIN S2120
1231          BA    .097
1232          LS              83
1233          UK     200   .0100    .200     100
1234          RK    3000   .0107    .040           TRAP       2       4

1235          KK   C2121
1236          KM        COMBINE S2120 AND R2117 AT STR. 30 (C2121)
1237          HC       2

1238          KK   R2123
1239          KM        ROUTE C2121 FROM STR. 30 TO C2129
1240          RK    4000   .0107   0.040           TRAP       2       4     YES

1241          KK   S2124
1242          KM        RUNOFF FROM SUBBASIN S2124
1243          BA     .11
1244          LS              80
1245          UK     200   .0076    .200     100
1246          RK    3800   .0107    .040           TRAP       2       4
1247          RK    1300   .0107    .020           TRAP       4       1

1248          KK   S2128
1249          KM        RUNOFF FROM SUBBASIN S2128
1250          BA    .122
1251          LS              84
1252          UK     200   .0076    .200     100
1253          RK    3800   .0107    .040           TRAP       4       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1254          KK   C2129
1255          KM        COMBINE S2128, S2124, R2123, AND R2115
1256          HC       5

1257          KK  DV2131
1258          KM        DIVERT 100% OF FLOWS S. ACROSS BROADWAY RD. TO R4147
1259          DT   D2131
1260          DI       0  100000
1261          DQ       0  100000

1262          KK   D1227
1263          KM        RETRIEVE DIVERTED HYDROGRAPH D1227
1264          DR   D1227

1265          KK   R2133
1266          KM        ROUTE D1227 THROUGH SUBBASIN S2136 TO STR. 29 (C2137)
1267          RK    3600   .0107    .040            TRAP       2       4     YES

1268          KK   S2136
1269          KM        RUNOFF FROM SUBBASIN S2136
1270          BA    .157
1271          LS              86
1272          UK     400   .0057    .200     100
1273          RK    3200   .0107    .040            TRAP       2       4

1274          KK   C2137
1275          KM        COMBINE S2136 AND R2133 AT STR. 29 (C2137)
1276          HC       2

1277          KK   R2139
1278          KM        ROUTE C2137 FROM STR. 29 TO C2149
1279          RK    1700   .0107    .040            TRAP       2       4     YES
1280          RK    2000   .0107    .035            TRAP      10       3     YES

1281          KK   S2140
1282          KM        RUNOFF FROM SUBBASIN S2140
1283          BA    .046
1284          LS              87
1285          UK     400   .0076    .200     100
1286          RK    1300   .0107    .040            TRAP       2       4

1287          KK   R2141
1288          KM        ROUTE S2140 FROM STR. 28 TO C2149 THROUGH S2148
1289          RK    1400   .0076    .040            TRAP       2       4     YES
1290          RK     200   .0107    .035            TRAP      10       3     YES

1291          KK   S2144
1292          KM        RUNOFF FROM SUBBASIN S2144
1293          BA    .047
1294          LS              91
1295          UK     100   .0076    .200     100
1296          RK     800   .0107    .040            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1297          KK   R2145
1298          KM        ROUTE S2144 FROM STR. 27 TO C2149 THROUGH S2148
1299          RK    1400   .0107    .040            TRAP       2       4     YES
1300          RK    1100   .0107    .035            TRAP      10       3     YES

1301          KK   S2148
1302          KM        RUNOFF FROM SUBBASIN S2148
1303          BA    .153
1304          LS              78
1305          UK     400   .0076    .200     100
1306          RK    1600   .0107    .040            TRAP       2       4
1307          RK    2000   .0107    .035            TRAP      10       3

1308          KK   C2149
1309          KM        COMBINE S2148, R2145, R2141, AND R2139
1310          HC       4

1311          KK   R2151
1312          KM        ROUTE C2149 TO C2155
1313          RK    1300   .0107    .035            TRAP      10       3     YES

1314          KK   S2154
1315          KM        RUNOFF FROM SUBBASIN S2154
1316          BA    .116
1317          LS              94
1318          UK     100   .0076    .200     100
1319          RK    1300   .0107    .035            TRAP       2      15
1320          RK    2600   .0107    .035            TRAP      10       3

1321          KK   C2155
1322          KM        COMBINE S2154 AND R2151 AT BROADWAY RD AND SIGNAL BUTTE (C2155)
1323          HC       3

1324          KK  DV2157
1325          KM        DIVERT FLOWS IN EXCESS OF CHANNEL CAPACITIY ACROSS BROADWAY RD.
1326          KM        INTO THE SUBBASIN S4210
1327          DT   D2157
1328          DI       0     800    1000    1200
1329          DQ       0       5     200     400

1330          KK   R2159
1331          KM        ROUTE DV2157 TO THE OVERCHUTE #8 (C2161)
1332          RK    2000   .0057    .035            TRAP      10       3     YES

1333          KK   S2160
1334          KM        RUNOFF FROM SUBBASIN S2160
1335          BA    .087
1336          LS              78
1337          UK     300   .0057    .200     100
1338          RK    2000   .0104    .035            TRAP       2      15
1339          RK    2000   .0104    .035            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1340          KK   C2161
1341          KM        COMBINE FLOWS FROM S2160 AND R2159
1342          HC       2

1343          KK   B2163
1344          KM        13<<<ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #8>>>
1345          RS       1    ELEV      63
1346          SV       0    1.47    1.58    1.69    1.80    2.02    2.13    2.24
1347          SQ       0      83     162     242     322     481     561     640
1348          SE      63    66.2    66.4    66.6    66.8    67.2    67.4    67.6

1349          KK   R2165
1350          KM        13<<<ROUTE HYDROGRAPH THROUGH CAP OVERCHUTE #8 BY 5-72">>>
1351          RK     120   .0107    .015            TRAP   23.60       8     YES

1352          KK  DV2167
1353          KM        DIVERT 100% OF FLOWS ACROSS OVERCHUTE #9 TO THE SOUTH (B4227)
1354          DT   D2167
1355          DI       0  100000
1356          DQ       0  100000

1357          KK   D1233
1358          KM        RETRIEVE DIVERTED HYDROGRAPH (D1233)
1359          DR   D1233

1360          KK   R2169
1361          KM        ROUTE D1233 TO STR. 25 AND 26 (C2181)
1362          RK    2000   .0107    .040            TRAP      20       0     YES
1363          RK    3000   .0105    .040            TRAP       2       4     YES

1364          KK   S2170
1365          KM        RUNOFF FROM SUBBASIN S2170
1366          BA    .114
1367          LS              85
1368          UK     200   .0057    .200     100
1369          RK    1800   .0107    .040            TRAP      20       0
1370          RK    3000   .0107    .040            TRAP       2       4

1371          KK   D1235
1372          KM        FLOWS FROM D1235 RETURNED TO SYSTEM
1373          DR   D1235

1374          KK  DV2171
1375          KM        DIVERT 50% OF D1235 INTO S2180
1376          DT   D2171
1377          DI       0     100     150     200     250     300     350     400     450     500
1378          DQ       0      50      75     100     125     150     175     200     225     250

1379          KK   R2173
1380          KM        ROUTE DV2171 TO C2175 THROUGH S2174
1381          RK    1500   .0107    .050            TRAP       2       4     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1382          KK   S2174
1383          KM        RUNOFF FROM SUBBASIN S2174
1384          BA    .036
1385          LS              78
1386          UK     400   .0057    .200     100
1387          RK    1100   .0107    .050            TRAP      2       4

1388          KK   C2175
1389          KM        COMBINE S2174 AND R2173
1390          HC       2

1391          KK   R2176
1392          KM        ROUTE C2175 TO STR. 25 AND 26 (C2181)
1393          RK    2000   .0104    .050            TRAP      2       4     YES

1394          KK   D2171
1395          KM        FLOWS FROM D2171 RETURNED TO SYSTEM
1396          DR   D2171

1397          KK   R2177
1398          KM        ROUTE D2171 TO STR. 25 AND 26 (C2181)
1399          RK    3000   .0104    .050            TRAP      2       4     YES

1400          KK   S2180
1401          KM        RUNOFF FROM SUBBASIN S2180
1402          BA    .067
1403          LS              82
1404          UK     500   .0057    .200     100
1405          RK    2500   .0104    .050            TRAP      2       4

1406          KK   C2181
1407          KM        COMBINE FLOWS FROM S2180, R2177, R2176, S2170, AND R2169
1408          HC       5

1409          KK   R2183
1410          KM        ROUTE FLOWS FROM STR. 25 AND 26 (C2181) TO OVERCHUTE #7 (C2189) THROUGH
1411          KM        S2188
1412          RK    4400   .0104    .040            TRAP      2       4     YES

1413          KK   S2184
1414          KM        RUNOFF FROM SUBBASIN S2184
1415          BA     .10
1416          LS              87
1417          UK     600   .0047    .200     100
1418          RK    3400   .0104    .050            TRAP      2       4

1419          KK   R2185
1420          KM        ROUTE FLOWS FROM STR. 24 (S2184) TO OVERCHUTE #7 (C2189) THROUGH S2188
1421          RK    2600   .0104    .040            TRAP      2       4     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1422          KK   S2188
1423          KM        RUNOFF FROM SUBBASIN S2188
1424          BA    .073
1425          LS              78
1426          UK     400   .0057    .200     100
1427          RK    4000   .0104    .040            TRAP       2       4

1428          KK   C2189
1429          KM        COMBINE FLOWS FROM S2188, R2185, AND R2183
1430          HC       4

1431          KK   B2191
1432          KM        13<<<ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE#7>>>
1433          DT   B2191       2
1434          DI       0      10   10000
1435          DQ       0       1       1

1436          KK   R2193
1437          KM        13<<<ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #7 BY 3-60"
1438          KM        HALF FULL>>>
1439          RK     120   .0104    .015            TRAP      13     4.5     YES

1440          KK  DV2195
1441          KM        DIVERT 100% OF FLOWS S. ACROSS BROADWAY RD. TO R4231
1442          DT   D2195
1443          DI       0     100     200     300     350     400     450     500     550     600
1444          DQ       0     100     200     300     350     400     450     500     550     600

1445          KK   S2196
1446          KM        RUNOFF FROM SUBBASIN S2196
1447          BA    .112
1448          LS              83
1449          UK     600  0.0047   0.200     100
1450          RK    3000  0.0104   0.050            TRAP       2       4

1451          KK   R2197
1452          KM        ROUTE FLOW FROM STR. 23 (S2196) TO CAP OVERCHUTE #6 (C2203) THROUGH
1453          KM        S2202
1454          RK    2000   .0057    .050            TRAP       2       4     YES
1455          KM        ROUTE FLOW FROM STR. 23 (S2196) TO CAP OVERCHUTE #6 (C2203) THROUGH

1456          KK   S2200
1457          KM        RUNOFF FROM SUBBASIN S2200
1458          BA    .054
1459          LS              90
1460          UK     400   .0057    .200     100
1461          RK    3600   .0104    .050            TRAP       2       4

1462          KK   R2201
1463          KM        ROUTE FLOWS FROM STR. 22 (S2200) TO CAP OVERCHUTE #6 (C2203) THROUGH
1464          KM        S2202
1465          RK     900  .00104    .050            TRAP       2       4     YES
1466          RK     900  .00104    .050            TRAP       2       4     YES
1467          RK     800   .0104    .035            TRAP      20       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1468          KK   S2202
1469          KM        RUNOFF FROM SUBBASIN S2202
1470          BA    .014
1471          LS              93
1472          UK     400   .0057    .200     100
1473          RK    2000   .0107    .050            TRAP       2       4
1474          RK    2400   .0107    .035            TRAP      20       3

1475          KK   C2203
1476          KM        COMBINE S2202, R2201, AND R2197 AT CAP OVERCHUTE #6 (C2203)
1477          HC       4

1478          KK   B2205
1479          KM        13 <<<ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #6>>>
1480          RS       1    ELEV      62
1481          SV       0    5.51   27.55   75.76  148.76
1482          SQ       0      84     276     525     705
1483          SE      62      64      66      68      76

1484          KK   R2207
1485          KM        13<<<ROUTE HYDROGRAPH THROUGH CAP OVERCHUTE #6 BY 3-60" RCP>>>
1486          RK     120  0.0107   0.015            TRAP      13     4.5     YES

1487          KK   S2210
1488          KM        RUNOFF FROM SUBBASIN S2210
1489          BA   0.075
1490          LS              79
1491          UK     500   .0057     0.2     100
1492          RK    2000  0.0104   0.050            TRAP       2       4

1493          KK   C2211
1494          KM        COMBINE S2210 AND R2207
1495          HC       2

1496          KK  DV2213
1497          KM        DIVERT 100 PERCENT S. ACROSS BROADWAY RD. TO R4233
1498          DT   D2213
1499          DI       0     100     200     300     400     500     600     700
1500          DQ       0     100     200     300     400     500     600     700

1501          KK   D1201
1502          KM        FLOWS FROM D1201 RETURNED TO SYSTEM
1503          DR   D1201

1504          KK   R2215
1505          KM        ROUTE D1201 TO CAP OVERCHUTE #5 AND STR 21 (C2221)
1506          RK    4000  0.0104   0.040            TRAP       2       4     YES

1507          KK   D1191
1508          KM        FLOWS FROM D1191 RETURNED TO SYSTEM
1509          DR   D1191
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1510          KK   R2217
1511          KM        ROUTE D1191 TO CAP OVERCHUTE #4 (C2221)
1512          RK    2800  0.0114   0.040            TRAP       2       8     YES

1513          KK   D1187
1514          KM        FLOWS FROM D1187 RETURNED TO SYSTEM
1515          DR   D1187

1516          KK   R2219
1517          KM        ROUTE D1187 TO CAP OVERCHUTE #4 (C2221)
1518          RK    2400  0.0115   0.040            TRAP       2       4     YES

1519          KK   S2220
1520          KM        RUNOFF FROM SUBBASIN S2220
1521          BA   0.165
1522          LS             80
1523          UK     400   .0047   0.200     100
1524          RK    3600  0.0104   0.040            TRAP       2       4

1525          KK   C2221
1526          KM        COMBINE S2220, R2219, R2217, AND R2215 AT OVERCHUTE #4 AND #5 (C2221)
1527          HC       4

1528          KK   B2223
1529          KM        13<<<ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #4 AND 5 >>>
1530          DT   B2223       2
1531          DI       0      10   10000
1532          DQ       0       1       1

1533          KK   R2225
1534          KM        13<<<ROUTE HYDROGRAPH THROUGH CAP OVERCHUTES #4 AND #5 BY 6-68">>>
1535          RK     120  0.0104   0.015            TRAP      26    5.82     YES

1536          KK  DV2227
1537          KM        DIVERT 50%  THROUGH S2234, THE REST THROUGH STR. 21 AT CRISMON AND
1538          KM        APACHE TRL. (R2235)
1539          DT   D2227
1540          DI       0     100     200     300     400     500     600     700     800     900
1541          DQ       0      50     100     150     200     250     300     350     400     450

1542          KK   R2231
1543          KM        ROUTE DV2227 THROUGH S2234
1544          RK    4000  0.0102    0.35            TRAP       5       2     YES

1545          KK   S2234
1546          KM        RUNOFF FROM SUBBASIN S2234
1547          BA    0.15
1548          LS             86
1549          UK     300   .0076     0.2     100
1550          RK    4000  0.0114   0.035            TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1551          KK   D2227
1552          KM        FLOWS FROM D2227 RETURNED TO SYSTEM
1553          DR   D2227

1554          KK   R2235
1555          KM        ROUTE D2227 FROM CAP OVERCHUTE #4 TO STR 20 AND THEN
1556          KM        TO THE C2237 THROUGH SUBBASIN S2234
1557          RK    4000  0.0104   0.035            TRAP       5       2     YES

1558          KK   C2237
1559          KM        COMBINE FLOWS FROM R2235, S2234, AND R2231
1560          HC       3

1561          KK   R2239
1562          KM        ROUTE C2237 TO C2249 THROUGH S2248
1563          RK    2700  0.0114   0.035            TRAP       5       2     YES

1564          KK   S2240
1565          KM        RUNOFF FROM SUBBASIN S2240
1566          BA  0.0775
1567          LS             83
1568          UK     200   .0076     0.2     100
1569          RK    3000   .0114   0.050            TRAP       5       2

1570          KK   R2241
1571          KM        ROUTE FROM STR 19 (S2240) TO C2249 THROUGH S2248
1572          RK    2000  0.0075   0.050            TRAP      20       0     YES
1573          RK    2700  0.0114   0.035            TRAP       5       2     YES

1574          KK   S2244
1575          KM        RUNOFF FROM SUBBASIN S2244
1576          BA   0.082
1577          LS             86
1578          UK     200   .0076     0.2     100
1579          RK    4000  0.0115   0.035            TRAP       5       2

1580          KK   R2245
1581          KM        ROUTE S2244 FROM STR 17 AND 18 TO C2249
1582          RK    2000  0.0114   0.050            TRAP      20       0     YES
1583          RK    2000  0.0114   0.035            TRAP       5       2

1584          KK   S2248
1585          KM        RUNOFF FROM SUBBASIN S2248
1586          BA   0.213
1587          LS             86
1588          UK     300  0.0076   0.200     100
1589          RK    2000  0.0114   0.050    0.05    TRAP      20       0
1590          RK    2000  0.0076   0.035            TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1591          KK   C2249
1592          KM        COMBINE S2248, R2245, R2241, AND R2239
1593          HC       4

1594          KK   S2250
1595          KM        RUNOFF FROM SUBBASIN S2250
1596          BA    0.10
1597          LS              84
1598          UK     200   .0076   0.200     100
1599          RK    3000   .0114   0.040           TRAP       2       3

1600          KK  DV2251
1601          KM        DIVERT 50% S. ACROSS BROADWAY RD. TO R4277
1602          DT   D2251
1603          DI       0      10      20      30      40      50      60
1604          DQ       0       5      10      15      20      25      30

1605          KK   R2253
1606          KM        ROUTE DV2251 TO ELLSWORTH AND BROADWAY (C2255)
1607          RK    2700   .0076   0.040           TRAP       2       3     YES

1608          KK   S2254
1609          KM        RUNOFF FROM SUBBASIN S2254
1610          BA   0.083
1611          LS              86
1612          UK     200   .0076     0.2     100
1613          RK    2700  0.0115   0.040           TRAP       2       3

1614          KK   C2255
1615          KM        COMBINE S2254, R2253, C2249, AND DV2213 AT ELLSWORTH AND BROADWAY(C2255)
1616          HC       4

1617          KK  DV2257
1618          KM        DIVERT FLOWS IN EXCESS OF CHANNEL CAPACITY ACROSS BROADWAY-CVL TO R4279
1619          DT   D2257
1620          DI     0.0     550    1000
1621          DQ     0.0       2     115

1622          KK   R2259
1623          KM        ROUTE DV2257 TO C2277 BY CONCRETE CHANNEL
1624          RK    2800   .0081   0.035           TRAP       5       2     YES

1625          KK   S2260
1626          KM        RUNOFF FROM SUBBASIN S2260
1627          BA   0.080
1628          LS              85
1629          UK     100   .0081     0.2     100
1630          RK    3700  0.0117   0.040           TRAP       5       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1631          KK   D1185
1632          KM        FLOWS FROM D1185 RETURNED TO SYSTEM
1633          DR   D1185

1634          KK   R2261
1635          KM        ROUTE D1185 TO CAP OVERCHUTE #3 (C2265)
1636          RK    1300  0.0118   0.040            TRAP       2       4     YES

1637          KK   S2264
1638          KM        RUNOFF FROM SUBBASIN S2264
1639          BA   0.124
1640          LS             83
1641          UK     200  0.0076     0.2     100
1642          RK    2700  0.0114   0.035            TRAP       8     1.5

1643          KK   C2265
1644          KM        COMBINE S2264 AND R2261 AT CAP OVERCHUTE #3 (C2265)
1645          HC       2

1646          KK   R2267
1647          KM        ROUTE CC2265 TO STR 16 AT APACHE TRAIL AND ELLSWORTH RD (C2269)
1648          RK    3600  0.0114   0.050            TRAP      20       0     YES

1649          KK   S2268
1650          KM        RUNOFF FROM SUBBASIN S2268
1651          BA   0.077
1652          LS             86
1653          UK     100   .0076    0.02     100
1654          RK    3500   .0114   0.050            TRAP      20       0

1655          KK   C2269
1656          KM        COMBINE S2268 AND R2267 AT STR 16, APACHE TRAIL AND ELLSWORTH RD (C2269)
1657          HC       2

1658          KK   R2271
1659          KM         ROUTE FLOW FROM C2269 TO C2277
1660          RK    3800  0.0117   0.035            TRAP       5       2     YES

1661          KK   S2274
1662          KM        RUNOFF FROM SUBBASIN S2274
1663          BA   0.106
1664          LS             87
1665          UK     100   .0076     0.2     100
1666          RK    4000  0.0114   0.050            TRAP      20       0

1667          KK   R2275
1668          KM        ROUTE S2274 FROM STR 15 TO C2277
1669          RK    4000  0.0117   0.035            TRAP       5       2     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1670          KK   C2277
1671          KM        COMBINE R2275, R2271, S2260, AND R2259
1672          HC       4

1673          KK   D1181
1674          KM        FLOWS FROM D1181 RETURNED TO SYSTEM
1675          DR   D1181

1676          KK   R2279
1677          KM        ROUTE D1181 TO STR 14 (C2287) THROUGH S2284
1678          RK    4200  0.0117   0.040            TRAP      32       6     YES

1679          KK   D1167
1680          KM        FLOWS FROM D1167 RETURNED TO SYSTEM
1681          DR   D1167

1682          KK   R2281
1683          KM        ROUTE D1167 TO STR 14 (C2287) THROUGH S2284
1684          RK    3500  0.0117   0.040            TRAP      32       6     YES

1685          KK   S2284
1686          KM        RUNOFF FROM SUBBASIN S2284
1687          BA    0.11
1688          LS              78
1689          UK     200   .0076     0.2     100
1690          RK    3600  0.0117   0.040            TRAP      32       6

1691          KK   S2286
1692          KM        RUNOFF FROM SUBBASIN S2286
1693          BA   0.114
1694          LS              89
1695          UK     200   .0076     0.2     100
1696          RK    3200  0.0117   0.035            TRAP       2      15

1697          KK   C2287
1698          KM        COMBINE R2279, R2281, S2284, AND S2286 AT STR 14 (C2287)
1699          HC       4

1700          KK   R2289
1701          KM        ROUTE C2287 TO C2291
1702          RK    2600  0.0117   0.035            TRAP       5       2     YES

1703          KK   S2290
1704          KM        RUNOFF FROM SUBBASIN S2290
1705          BA   0.155
1706          LS              79
1707          UK     200   .0081     0.2     100
1708          RK    3800  0.0117   0.050            TRAP      20       0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1709          KK   C2291
1710          KM        COMBINE S2290, R2289, AND C2277
1711          HC       3

1712          KK  DV2293
1713          KM        DIVERT FLOWS IN EXCESS OF CHANNEL CAPACITY ACROSS BROADWY-CVL TO R4369
1714          DT   D2293
1715          DI       0     845    2200
1716          DQ       0       0     765

1717          KK   R2295
1718          KM        ROUTE DV2293 TO C2315
1719          RK    1700   .0117   0.035            TRAP      20       0     YES

1720          KK   D1161
1721          KM        FLOWS FROM D1161 RETURNED TO SYSTEM
1722          DR   D1161

1723          KK   R2299
1724          KM        ROUTE D1161 TO STR 13 AT APACHE TRAIL (R2301)
1725          RK    2600  0.0117   0.035            TRAP       2      15     YES

1726          KK   R2301
1727          KM        ROUTE D1161 FROM STR 13 AT APACHE TRAIL TO C2315 AT BROADWAY RD
1728          RK    2200  0.0117   0.040            TRAP       1      20     YES
1729          RK    1300  0.0117   0.035            TRAP       5       2     YES

1730          KK   S2304
1731          KM        RUNOFF FROM SUBASIN S2304
1732          BA   0.159
1733          LS             82
1734          UK     700   .0076     0.2     100
1735          RK    1600  0.0117   0.035            TRAP       2      15
1736          RK    1600  0.0117   0.040            TRAP       4       2

1737          KK  DV2305
1738          KM        DIVERT 50% OF FLOW FROM S2304 TO STR 11 INTO THE SUBBASIN S2324
1739          KM        AND THE REST THROUGH STR 12
1740          DT   D2305
1741          DI       0     100     200     300     400     500     600     700     800
1742          DQ       0      50     100     150     200     250     300     350     400

1743          KK   R2307
1744          KM        ROUTE 50% OF FLOWS THROUGH STR 12 TO C2315 AT BROADWAY ROAD
1745          RK    1000   .0117   0.040            TRAP       1      20     YES
1746          RK    2200  0.0117   0.035            TRAP       5       2

1747          KK   S2310
1748          KM        RUNOFF FROM SUBASIN S2310
1749          BA   0.116
1750          LS             88
1751          UK     600   .0081     0.2     100
1752          RK    2300   .0117   0.035            TRAP       2      15
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1753          KK   R2311
1754          KM        ROUTE FLOWS FROM S2310 TO C2315 AT BROADWAY ROAD
1755          RK    1100  0.0117   0.040            TRAP       5       2     YES

1756          KK   S2312
1757          KM        RUNOFF FROM SUBBASIN S2312
1758          BA   0.039
1759          LS              78
1760          UK    140   .0081    0.15     100
1761          RK   1300   .0117    0.02   0.008    TRAP      30       0
1762          RK    700  0.0117    0.02            TRAP      30       0

1763          KK   B2313
1764          KM        RETENTION BASIN FOR SUBBASIN S2312
1765          RS      1    STOR       0
1766          SA   0.92    0.92    0.92    0.92    0.92    0.92    0.92    0.92
1767          SQ      0    0.01      10      20      30      40      50     100
1768          SE      0       5       5    5.02    5.04    5.06    5.08    5.10

1769          KK   C2315
1770          KM        COMBINE R2295, R2301, R2307, R2311, AND B2313
1771          HC      5

1772          KK  DV2317
1773          KM        DIVERT FLOWS IN EXCESS OF CHANNEL CAPACITY ACROSS BROADWAY-CVL TO R4271
1774          DT   D2317
1775          DI      0     845    1450
1776          DQ      0       0     345

1777          KK   R2319
1778          KM        ROUTE DV2317 TO C2325 AT 84TH ST (HAWES RD) AND BROADWAY  RAOD
1779          RK    1000   .0081   0.035            TRAP      20       0     YES

1780          KK   D2305
1781          KM        FLOWS FROM D2305 RETURNED TO SYSTEM
1782          DR   D2305

1783          KK   R2321
1784          KM        ROUTE D2305 FROM STR 11 TO C2325 AT 84TH ST (HAWES RD) AND BROADWAY RD
1785          RK    1000   .0117   0.040            TRAP       3       2     YES
1786          RK    2700   .0117   0.035            TRAP      25       2

1787          KK   S2324
1788          KM        RUNOFF FROM SUBBASIN S2324
1789          BA   0.090
1790          LS              84
1791          UK     200  0.0081     0.2     100
1792          RK    2200   .0117   0.035            TRAP      20       0
1793          RK     800  0.0117   0.020            TRAP      16       0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1794          KK   C2325
1795          KM        COMBINE S2324, R2321, AND R2319 AT (C2325) 84TH STREET AND BROADWAY ROAD
1796          HC       3

1797          KK  DV2327
1798          KM        DIVERT FLOWS FROM BROADWAY CHANNEL SOUTH ON 84TH ST.- CVL TO R4375
1799          DT   D2327
1800          DI       0     300     640    1330    2310
1801          DQ       0     300     600    1020    1540

1802          KK   S2330
1803          KM        RUNOFF FROM SUBBASIN S2330
1804          BA   0.045
1805          LS              98
1806          UK     100     0.2     0.2     100
1807          RK    1800   .0070   0.040            TRAP       2       3

1808          KK   R2331
1809          KM        ROUTE S2330 THROUGH S2346 TO C2349
1810          RK    2800   .0114    0.02            TRAP      30       0     YES
1811          RK    2300  0.0114   0.035            TRAP      20       0

1812          KK   D1135
1813          KM        FLOWS FROM D1135 RETURNED TO SYSTEM
1814          DR   D1135

1815          KK   R2333
1816          KM        ROUTE D1135 TO C2335
1817          RK    1200   .0114    0.05            TRAP       5       2

1818          KK   D1141
1819          KM        FLOWS FROM D1141 RETURNED TO SYSTEM
1820          DR   D1141

1821          KK   C2335
1822          KM        COMBINE R2333 AND D1141
1823          HC       2   0.001

1824          KK   R2337
1825          KM        ROUTE C2335 TO C2341 AT APACHE TRAIL
1826          RK    2800   .0117   0.040            TRAP       5       2

1827          KK   S2340
1828          KM        RUNOFF FROM SUBBASIN S2340
1829          BA   0.278
1830          LS              87
1831          UK      90   .0076   0.200     100
1832          RK    2400   .0114   0.035            TRAP      20       0
1833          RK    2800   .0114   0.040            TRAP       5       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1834          KK   C2341
1835          KM        COMBINE S2340 AND R2337 AT STR. 9
1836          HC       2

1837          KK   R2343
1838          KM        ROUTE C2341 FROM STR. 9 TO C2349
1839          RK    2700  0.0114   0.035            TRAP      20       0     YES
1840          RK    1300  0.0114   0.035            TRAP      16       0

1841          KK   S2346
1842          KM        RUNOFF FROM SUBBASIN S2346
1843          BA   0.318
1844          LS              87
1845          UK      90   .0070   0.200     100
1846          RK    2600  0.0114   0.035            TRAP      20       0
1847          RK    3000  0.0114   0.035            TRAP      16       0

1848          KK   C2349
1849          KM        COMBINE  DV2327, R2331, R2343, AND S2346
1850          HC       4

1851          KK   R2351
1852          KM        ROUTE C2349 TO C2383 ALONG BROADWAY RD
1853          RK    2100  0.0070  0.0035            TRAP      16       0     YES

1854          KK   D1147
1855          KM        FLOWS FROM D1147 RETURNED TO SYSTEM
1856          DR   D1147

1857          KK   R2353
1858          KM        ROUTE D1147 TO STR. 8 AT BROADWAY RD
1859          RK    2600   0.010   0.035            TRAP      20       2     YES

1860          KK   R2355
1861          KM        ROUTE D1147 FROM STR. 8 TO C2377 THROUGH M.H.P.
1862          RK    3800   .0114   0.035            TRAP       5       2     YES

1863          KK   S2358
1864          KM        RUNOFF FROM SUBBASSIN S2358 AT STR. 7
1865          BA   0.098
1866          LS              75
1867          UK     200  0.0070   0.200     100
1868          RK    3000   .0114    0.05            TRAP       2      20

1869          KK   R2359
1870          KM        ROUTE S2358 FROM STR. 7 TO C2377
1871          RK    3100   .0114   0.035            TRAP      20       2     YES

1872          KK   D1095
1873          KM        FLOWS FROM D1095 RETURNED TO SYSTEM
1874          DR   D1095
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1875          KK   R2361
1876          KM        ROUTE D1095 THROUGH S2364
1877          RK    2600   0.010   0.050            TRAP       2      20     YES

1878          KK   S2364
1879          KM        FLOW FROM SUBBASIN S2364
1880          BA   0.060
1881          LS             79
1882          UK     600   .0076   0.200     100
1883          RK    2000   .0114   0.050            TRAP       2      20

1884          KK   C2365
1885          KM        COMBINE R2361 AND S2364 AT STR. 6 (C2365)
1886          HC       2

1887          KK   R2367
1888          KM        ROUTE C2365 TO C2377 THROUGH M.H.P.
1889          RK    2500   .0114   0.035            TRAP      20       2     YES

1890          KK   D1101
1891          KM        FLOWS FROM D1101 RETURNED TO SYSTEM
1892          DR   D1101

1893          KK   R2369
1894          KM        ROUTE D1101 TO APACHE TR. AND SOSSAMAN RD. (C2371)
1895          RK    2700  0.0114   0.035            TRAP      20       2     YES

1896          KK   S2370
1897          KM        RUNOFF FROM SUBBASIN S2370
1898          BA    .254
1899          LS             83
1900          UK     600   .0076    .200     100
1901          RK    2700   .0114     .05            TRAP       2      20

1902          KK   C2371
1903          KM        COMBINE S2370 AND R2369 AT APACHE TR. AND SOSSAMAN RD. (C2371)
1904          HC       2

1905          KK  DV2373
1906          KM        DIVERT 25% TO STR. 5 (R2389)
1907          DT   D2373
1908          DI       0     100     200     300     400     500     600     700     800     900
1909          DQ       0      25      50      75     100     125     150     175     200     250

1910          KK   R2375
1911          KM        ROUTE DDV2373 TO C2377
1912          RK    1800   .0114    .035            TRAP      20       2     YES

1913          KK   S2376
1914          KM        RUNOFF FROM SUBBASIN S2376
1915          BA    .114
1916          LS             92
1917          UK      90   .0070    .200     100
1918          RK    2800   .0114    .035            TRAP      20       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1919          KK   C2377
1920          KM        COMBINE R2355, R2359, R2367, R2375, AND S2376
1921          HC       5

1922          KK   R2379
1923          KM        ROUTE C2377 TO C2383
1924          RK     800   .0114    .035            TRAP       5       2     YES

1925          KK   S2380
1926          KM        RUNOFF FROM SUBBASIN S2380
1927          BA    .099
1928          LS              93
1929          UK      90   .0070    .200     100
1930          RK    2400   .0114    .035            TRAP      20       2
1931          RK    1800   .0114    .035            TRAP      16       0

1932          KK   B2381
1933          KM        RETENTION BASIN FROM S2380, CVL
1934          RS       1    STOR      .0
1935          SV       0    14.0   14.05   14.10   14.12   14.14   14.16
1936          SQ       0     .01      50     100     120     140     160
1937          SE       0       5    5.05     5.1    5.12    5.14    5.16

1938          KK   C2383
1939          KM        COMBINE HYDROGRAPHS FROM R2351, R2379, AND B2381
1940          HC       3

1941          KK  DV2385
1942          KM        DIVERT FLOWS IN EXCESS OF SOSSAMAN RD CAPACITY DWN BROADWAY-CVL TO R4425
1943          DT   D2385
1944          DI       0     400     880    1580    2750
1945          DQ       0     400     750    1120    1790

1946          KK   D1107
1947          KM        FLOWS FROM D1107 RETURNED TO SYSTEM
1948          DR   D1107

1949          KK   R2387
1950          KM        ROUTE D1107 TO (C2391) STRS. 4 & 5 THROUGH S2390
1951          RK    2800   .0130    .040            TRAP       2      20     YES

1952          KK   D2373
1953          KM        FLOWS FROM D2373 RETURNED TO SYSTEM
1954          DR   D2373

1955          KK   R2389
1956          KM        ROUTE D2373 TO STRS. 4 & 5 (C2391)
1957          RK    1200   .0130    .040            TRAP       4       2     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1958          KK   S2390
1959          KM        RUNOFF FROM SUBBASIN S2390
1960          BA    .142
1961          LS              87
1962          UK     600   .0076    .200     100
1963          RK    2800   .0130    .040           TRAP       2      20

1964          KK   C2391
1965          KM        COMBINED R2387, R2389,AND S2390 AT STRS. 4 & 5 (2391)
1966          HC       3

1967          KK   R2393
1968          KM        ROUTE C2391 TO C2401
1969          RK    2600   .0130   .0235           TRAP      20       0     YES
1970          RK    2000   .0130    .035           TRAP      16       0

1971          KK   S2396
1972          KM        RUNOFF FROM SUBBASIN S2396
1973          BA    .088
1974          LS              87
1975          UK     800   .0076    .200     100
1976          RK    2200   .0130    .040           TRAP       2      20

1977          KK   R2397
1978          KM        ROUTE S2396 TO C2401
1979          RK    2700   .0130    .035           TRAP      20       2     YES

1980          KK   S2400
1981          KM        RUNOFF FROM SUBBASIN S2400
1982          BA    .254
1983          LS              89
1984          UK      90   .0063    .200     100
1985          RK    4600   .0130    .035           TRAP      20       2

1986          KK   C2401
1987          KM        COMBINE DV2385, R2393, R2397, AND S2400 AT 72ND ST. AND BROADWAY RD
1988          HC       4

1989          KK  DV2403
1990          KM        DIVERT PARTIAL FLOWS WESTWARD ALONG BROADWAY RD.-CVL TO C4471
1991          DT   D2403
1992          DI       0     550    1000
1993          DQ       0       0     450

1994          KK   D1115
1995          KM        FLOWS FROM D1115 RETURNED TO SYSTEM
1996          DR   D1115

1997          KK   R2405
1998          KM        ROUTE D1115 TO STR. 2 AT C2411
1999          RK    3600   .0130    .040           TRAP       2      20     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2000          KK   D1121
2001          KM        FLOWS FROM D1121 RETURNED TO SYSTEM
2002          DR   D1121

2003          KK   R2407
2004          KM        ROUTE D1121 TO STR. 2 AT C2411
2005          RK    2600   .0130    .040            TRAP       2      20     YES

2006          KK   S2410
2007          KM        RUNOFF FROM SUBBASIN S2410
2008          BA    .116
2009          LS              78
2010          UK     800   .0076    .200     100
2011          RK    2600   .0130    .040            TRAP       2      20

2012          KK   C2411
2013          KM        COMBINE S2410, R2407, AND R2405 AT STR. 2 (C2411)
2014          HC       3

2015          KK   R2413
2016          KM        ROUTE C2411 TO BROADWAY ROAD AND POWERLINE ROAD (C2417)
2017          RK    4000   .0130    .035            TRAP      20       2     YES

2018          KK   S2416
2019          KM        RUNOFF FROM SUBBASIN S2416
2020          BA    .123
2021          LS              80
2022          UK     100   .0063    .200     100
2023          RK    5000   .0130    .045            TRAP      20       2

2024          KK   C2417
2025          KM        COMBINE R2007, DV2403, R2413, AND S2416 AT BROADWAY RD & POWERLINE RD
2026          HC       4

2027          KK  DV2419
2028          KM        DIVERT 100% OF RUNOFF WEST ALONG BROADWAY RD. TO R3297
2029          DT   D2419
2030          DI       0  100000
2031          DQ       0  100000

2032          KK   D1023
2033          KM        RETRIEVE DIVERTED HYDROGRAPH D1023 FROM E. OF BUSH HWY.
2034          DR   D1023

2035          KK   S3002
2036          KM         RUNOFF FROM SUBBASIN S3002
2037          BA   0.094
2038          LS              80
2039          UK     200  0.0131   0.200     100
2040          RK     800   0.005   0.035    0.01    TRAP       1      10
2041          RK    2700  0.0127   0.030            TRAP      80       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2042          KK   C3003
2043          KM          COMBINE FLOWS FROM D1023 AND S3002
2044          HC       3

2045          KK   R3005
2046          KM          ROUTE C3003 TO C3009
2047          RK    1200   0.010   0.020            TRAP       8     1.5     YES

2048          KK   S3008
2049          KM          RUNOFF FROM SUBBASIN S3008
2050          BA   0.070
2051          LS              88
2052          UK    100   0.005   0.200     100
2053          RK    2800  0.0127   0.025            TRAP       2      20

2054          KK   C3009
2055          KM          COMBINE FLOWS FROM R3005 AND S3008
2056          HC       2

2057          KK   R3011
2058          KM          ROUTE C3009 TO C3023
2059          RK    3500  0.0127   0.030            TRAP       8     1.5     YES

2060          KK   S3012
2061          KM          RUNOFF FROM SUBBASIN S3012
2062          BA    0.19
2063          LS              86
2064          UK     200   0.005   0.200     100
2065          RK    5600  0.0133    0.04            TRAP       3      10

2066          KK   R3013
2067          KM          ROUTE S3012 HYDROGRAPH TO C3023 THROUGH S3020
2068          RK    1400  0.0070   0.035            TRAP       2      15     YES
2069          RK    2500  0.0091   0.025            TRAP       8     1.5

2070          KK   S3016
2071          KM          RUNOFF FROM SUBBASIN S3016
2072          BA   0.147
2073          LS              65
2074          UK     200  0.0140   0.200     100
2075          RK    3600  0.0133   0.045            TRAP      10      30

2076          KK   R3017
2077          KM          ROUTE S3016 HYDROGRAPH TO C3023
2078          RK    1400  0.0049   0.025            TRAP       3      50     YES

2079          KK   S3020
2080          KM          RUNOFF FROM SUBBASIN S3020
2081          BA    0.13
2082          LS              90
2083          UK     200   0.010   0.200     100
2084          RK    1400  0.0070   0.035    0.02    TRAP       2      15
2085          RK    2500  0.0091   0.025            TRAP       8     1.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2086          KK   B3021
2087          KM          THE RETENTION BASIN VOLUME ESTIMATED 10 AC. FT.
2088          RS       1   STOR       0
2089          SV       0   10.0    10.1
2090          SQ       0   0.01     250

2091          KK   C3023
2092          KM          COMBINE HYDROGRAPHS B3021, R3017, R3013, AND R3011
2093          HC       4

2094          KK   R3025
2095          KM          ROUTE C3023 HYDROGRAPH TO C3041
2096          RK    1300  0.0049   0.025            TRAP       3      50     YES

2097          KK   D1031
2098          KM          RETRIEVE DIVERTED HYDROGRAPH D1031 FROM E. OF BUSH HWY.
2099          DR   D1031

2100          KK   R3027
2101          KM          ROUTE RETRIEVED HYDROGRAPH TO C3031
2102          RK    4000   0.007   0.025            TRAP       3      20     YES

2103          KK   S3028
2104          KM          RUNOFF FROM SUBBASIN S3028
2105          BA    0.27
2106          LS              88
2107          UK     250   0.010   0.200     100
2108          RK    4000   0.007   0.025            TRAP       3      20

2109          KK   B3029
2110          KM          ROUTE HYDROGRAPH S3028 THROUGH RETENTION AREA V=15 AC. FT.
2111          RS       1   STOR       0
2112          SV       0   15.0    15.1
2113          SQ       0   0.01     300

2114          KK   C3031
2115          KM          COMBINE HYDROGRAPHS B3029 AND R3027
2116          HC       2

2117          KK  DV3033
2118          KM          DIVERT 50% OF FLOW SOUTH TO R3045
2119          DT   D3033
2120          DI       0      10   10000
2121          DQ       0       5    5000

2122          KK   R3035
2123          KM          ROUTE DV3033 TO C3041
2124          RK    2640   0.010   0.025            TRAP       3      20     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2125          KK   S3038
2126          KM          RUNOFFS FROM SUBBASIN S3038
2127          BA    0.13
2128          LS              86
2129          UK     250   0.010   0.200     100
2130          RK    2500   0.007   0.025           TRAP       3      20

2131          KK   B3039
2132          KM          ROUTE HYDROGRAPH S3038 THROUGH RETENTION BASIN V=10 AC. FT.
2133          RS       1    STOR       0
2134          SV       0      10    10.1
2135          SQ       0    0.01     200

2136          KK   C3041
2137          KM          COMBINE RUNOFFS FROM B3039, R3035, AND R3025
2138          HC       3

2139          KK   R3043
2140          KM          ROUTE HYDROGRAPH TO C3051
2141          RK    2640  0.0049   0.025           TRAP       3      50     YES

2142          KK   D3033
2143          KM          RETRIEVE DIVERTED HYDROGRAPH D3033
2144          DR   D3033

2145          KK   R3045
2146          KM          ROUTE DIVERTED HYDROGRAPH D3033 TO C3051
2147          RK    2000   0.010   0.040           TRAP       5     1.5
2148          RK    3000   0.009   0.025           TRAP       3      20

2149          KK   D1037
2150          KM          RETRIEVE DIVERTED HYDROGRAPH D1037
2151          DR   D1037

2152          KK   R3047
2153          KM          ROUTE RETRIEVED HYDROGRAPH D1037 TO C3051
2154          RK    2000  0.0090   0.050           TRAP       3      10
2155          RK    5000  0.0091   0.025           TRAP       3      30

2156          KK   D1043
2157          KM          RETRIEVE DIVERTED HYDROGRAPH D1043
2158          DR   D1043

2159          KK   R3049
2160          KM          ROUTE RETRIEVED HYDROGRAPH D1043 TO C3051
2161          RK    1200  0.0090   0.050           TRAP       3      10
2162          RK    5000  0.0091   0.025           TRAP       3      30

2163          KK   C3051
2164          KM          COMBINE HYDROGRAPHS R3049, R3047, R3045, AND R3043
2165          HC       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2166          KK   D1049
2167          KM          RETRIEVE DIVERTED HYDROGRAPH D1049
2168          DR   D1049

2169          KK   R3053
2170          KM          ROUTE RETRIEVED HYDROGRAPH D1049 TO C3061
2171          RK    1300  0.0080   0.050            TRAP       3      10
2172          RK    4800  0.0091   0.025            TRAP       3      50

2173          KK   D1055
2174          KM          RETRIEVE DIVERTED HYDROGRAPH D1055
2175          DR   D1055

2176          KK   R3055
2177          KM          ROUTE RETRIEVED HYDROGRAPH D1055 TO C3061
2178          RK     600  0.0080   0.050            TRAP       3      10
2179          RK    4800  0.0091   0.025            TRAP       3      50

2180          KK   S3060
2181          KM          RUNOFF FROM SUBBASIN S3060
2182          BA    0.59
2183          LS              84
2184          UK     250  0.0085   0.200     100
2185          RK    2000  0.0090   0.050            TRAP       3      10
2186          RK    5000  0.0091   0.025            TRAP       3      50

2187          KK   C3061
2188          KM          COMBINE RUNOFF FROM S3060, R3055, R3053, AND C3051 AT BROWN & RECKER
2189          HC       4

2190          KK  DV3063
2191          KM          DIVERT 50% OF RUNOFF S. THROUGH RECKER RD. TO R3079
2192          DT   D3063
2193          DI       0      10   10000
2194          DQ       0       5    5000

2195          KK   R3065
2196          KM          ROUTE HYDROGRAPH DV3063 TO C3077
2197          RK    5000   0.007   0.025            TRAP       3      30     YES
2198          RK    2800   0.009   0.045            TRAP       3      50

2199          KK   S3066
2200          KM          RUNOFF FROM SUBBASIN S3066
2201          BA   0.104
2202          LS              80
2203          UK     250   0.005   0.200     100
2204          RK    6200  0.0095   0.025            TRAP       3      30

2205          KK   B3067
2206          KM          ROUTE S3066 THROUGH RETENTION BASIN V=30 AC. FT.
2207          RS       1    STOR       0
2208          SV       0      30    30.1
2209          SQ       0    0.01     750
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2210          KK  DV3069
2211          KM          DIVERT 50% OF OVERFLOW W. TO BROWN & HIGLEY (R3097)
2212          DT   D3069
2213          DI       0      10   10000
2214          DQ       0       5    5000

2215          KK   R3071
2216          KM          ROUTE 50% OF THE OVERFLOW DV3069 FROM B3067 TO C3077
2217          RK    3000  0.0090   0.045            TRAP       3      50     YES

2218          KK   S3074
2219          KM          RUNOFF FROM SUBBASIN S3074
2220          BA    0.46
2221          LS              85
2222          UK     250   0.006   0.200     100
2223          RK    5000   0.007   0.025    0.20    TRAP       3      30
2224          RK    2800   0.009   0.045            TRAP       3      50

2225          KK   B3075
2226          KM          ROUTE S3074 HYDROGRAPH THROUGH RETENTION BASIN V=25 AC. FT.
2227          RS       1    STOR       0
2228          SV       0      20    20.1
2229          SQ       0    0.01     500

2230          KK   C3077
2231          KM          COMBINE FLOWS FROM B3075, R3071, AND R3065
2232          HC       3

2233          KK   D3063
2234          KM          RETRIEVE DIVERTED HYDROGRAPH D3063
2235          DR   D3063

2236          KK   R3079
2237          KM          ROUTE RETRIEVED HYDROGRAPH (D3063) S. TO DV3081
2238          RK    2640  0.0049   0.025            TRAP       2      50

2239          KK  DV3081
2240          KM          DIVERT 80% OF FLOW S. TO R3231
2241          DT   D3081
2242          DI       0      10   10000
2243          DQ       0       8    8000

2244          KK   R3083
2245          KM          ROUTE DV3081 TO C3085
2246          RK    1320  0.0080   0.025            TRAP       2      30

2247          KK   S3084
2248          KM          RUNOFF FROM SUBBASIN S3084
2249          BA   0.061
2250          LS              88
2251          UK     250  0.0049   0.200     100
2252          RK    3400  0.0080   0.025            TRAP       3      30
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2253          KK   C3085
2254          KM          COMBINE HYDROGRAPHS FROM S3084 AND R3083
2255          HC       2

2256          KK  DV3087
2257          KM          DIVERT 20% OF FLOW SOUTH TO R3235
2258          DT   D3087
2259          DI       0      10   10000
2260          DQ       0       2    2000

2261          KK   R3089
2262          KM          ROUTE HYDROGRAPH TO C3091
2263          RK   13200  0.0080   0.025            TRAP       3      30     YES

2264          KK   C3091
2265          KM          COMBINE FLOWS FROM R3089 AND C3077
2266          HC       2

2267          KK  DV3093
2268          KM          DIVERT 50% OF FLOW S. ALONG HIGLEY RD. TO R3247
2269          DT   D3093
2270          DI       0      10   10000
2271          DQ       0       5    5000

2272          KK   R3095
2273          KM          ROUTE DV3093 TO C3203
2274          RK    3100  0.0065   0.025            TRAP       3      50

2275          KK   D3069
2276          KM          RETRIEVE DIVERTED HYDROGRAPH D3069
2277          DR   D3069

2278          KK   R3097
2279          KM          ROUTE RETRIEVED HYDROGRAPH TO C3103
2280          RK    4200  0.0076   0.045            TRAP       5     1.5

2281          KK   S3100
2282          KM          RUNOFF FROM SUBBASIN S3100
2283          BA    0.46
2284          LS              84
2285          UK     200  0.0035   0.200     100
2286          RK    4000  0.0070   0.045    0.18    TRAP       5      20
2287          RK    2800  0.0076   0.025            TRAP       3      50

2288          KK   B3101
2289          KM          ROUTE THE HYDROGRAPH S3100 THROUGH RETENTION BASIN V=20 AC. FT.
2290          RS       1    STOR       0
2291          SV       0      20    20.1
2292          SQ       0    0.01     550
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2293          KK    EMF2
2294          KM          COMBINE FLOWS FROM B3101 AND R3097
2295          HC       2

2296          KK   R3105
2297          KM          ROUTE EMF2 TO C3203
2298          RK    3000  0.0001  0.0035            TRAP      80       3     YES

2299          KK   S3200
2300          KM          RUNOFF FROM SUBBASIN S3200
2301          BA   0.362
2302          LS              88
2303          UK     250  0.0044   0.200     100
2304          RK    4200   0.007   0.025            TRAP       3      20

2305          KK   B3201
2306          KM          ROUTE HYDROGRAPH S3200 THROUGH RETENTION BASIN V=20 AC. FT.
2307          RS       1    STOR       0
2308          SV       0      20    20.1
2309          SQ       0    0.01     350

2310          KK   C3203
2311          KM          COMBINE RUNOFFS FROM B3201, R3105, AND R3095
2312          HC       3

2313          KK   R3205
2314          KM          ROUTE HYDROGRAPH C3203 S. THROUGH C3261
2315          RK    3000 0.00015  0.0035            TRAP      80       3     YES

2316          KK   D1057
2317          KM          RETRIEVE DIVERTED HYDROGRAPH D1057
2318          DR   D1057

2319          KK   R3207
2320          KM          ROUTE RETRIEVED HYDROGRAPH THROUGH C3213
2321          RK    8680   0.010   0.025            TRAP       3      20

2322          KK   S3210
2323          KM          RUNOFF FROM SUBBASIN S3210
2324          BA    0.83
2325          LS              90
2326          UK     250   0.008   0.200     100
2327          RK    1400   0.010   0.045   0.125    TRAP       5      30
2328          RK    9000   0.010   0.025            TRAP       3      20

2329          KK   B3211
2330          KM          ROUTE HYDROGRAPH S3210 THROUGH RETENTION BASIN V=35 AC. FT.
2331          DT   B3211      35
2332          DI       0      10   10000
2333          DQ       0       1       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2334          KK   C3213
2335          KM          COMBINE FLOWS FROM B3211 AND R3207
2336          HC       2

2337          KK   D1067
2338          KM          RETRIEVE DIVERTED HYDROGRAPH D1067
2339          DR   D1067

2340          KK   R3215
2341          KM          ROUTE RETRIEVED HYDROGRAPH D1067 TO C3221
2342          RK    1600   0.009   0.025            TRAP       3      20
2343          RK    1600   0.010   0.050            TRAP       3       2

2344          KK   D1073
2345          KM          RETRIEVE DIVERTED HYDROGRAPH D1073
2346          DR   D1073

2347          KK   R3217
2348          KM          ROUTE RETRIEVED HYDROGRAPH D1073 TO C3221
2349          RK    2600   0.015   0.045            TRAP       3       2

2350          KK   D1131
2351          KM          RETRIEVE DIVERTED HYDROGRAPH D1131
2352          DR   D1131

2353          KK   R3219
2354          KM          ROUTE RETRIEVED HYDROGRAPH D1131 TO C3221
2355          RK    2600  0.0186   0.040            TRAP       4     1.5

2356          KK   S3220
2357          KM          RUNOFF FROM SUBBASIN S3220
2358          BA   0.146
2359          LS            83
2360          UK     250   0.006   0.200     100
2361          RK    1600   0.009   0.025            TRAP       3      20
2362          RK    1600   0.010   0.050            TRAP       3       2

2363          KK   C3221
2364          KM          COMBINE RUNOFFS FROM S3220, R3219, R3217, AND R3215
2365          HC       4

2366          KK  DV3223
2367          KM          DIVERT 80% OF RUNOFF TO THE SOUTH TO R3305
2368          DT   D3223
2369          DI       0      10   10000
2370          DQ       0       8    8000

2371          KK   R3225
2372          KM          ROUTE HYDROGRAPH DV3223 TO C3227
2373          RK    2000  0.0186   0.035            TRAP       3       4     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2374          KK   C3227
2375          KM          COMBINE RUNOFF FROM C3213 AND R3225
2376          HC       2

2377          KK  DV3229
2378          KM          DIVERT 100% OF RUNOFF SOUTH ACROSS UNIVERSITY RD. TO C3265
2379          DT   D3229
2380          DI       0   10000
2381          DQ       0   10000

2382          KK   D3081
2383          KM          RETRIEVE DIVERTED HYDROGRAPH D3081
2384          DR   D3081

2385          KK   R3231
2386          KM          ROUTE RETRIEVED HYDROGRAPH D3081 TO UNIVERSITY & RECKER (DV3233)
2387          RK    2640  0.0063   0.025            TRAP       3      50

2388          KK  DV3233
2389          KM          DIVERT 100% OF RUNOFF SOUTH TO C3265
2390          DT   D3233
2391          DI       0   10000
2392          DQ       0   10000

2393          KK   D3087
2394          KM          RETRIEVE DIVERTED HYDROGRAPH D3087
2395          DR   D3087

2396          KK   R3235
2397          KM          ROUTE RETRIEVED HYDROGRAPH D3087 TO C3241
2398          RK    2600   0.006   0.025            TRAP       2      20

2399          KK   S3240
2400          KM          RUNOFF FROM SUBBASIN S3240
2401          BA    0.25
2402          LS              91
2403          UK     200   0.008   0.200     100
2404          RK    5200   0.006   0.025            TRAP       3      20

2405          KK   C3241
2406          KM          COMBINE FLOWS FROM S3240, R3235, DV3233, AND DV3229
2407          HC       4

2408          KK   R3243
2409          KM          ROUTE HYDROGRAPH C3241 TO C3251 AT UNIVERSITY AND HIGHLEY
2410          RK    2680   0.006   0.025            TRAP       3      20     YES

2411          KK   D3093
2412          KM          RETRIEVE DIVERTED HYDROGRAPH D3093
2413          DR   D3093
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2414          KK   R3247
2415          KM          ROUTE RETRIEVED HYDROGRAPH D3093 TO C3251
2416          RK    2600  0.0051   0.040            TRAP       3      50

2417          KK   S3250
2418          KM          RUNOFF FROM SUBBASIN S3250
2419          BA    0.25
2420          LS              93
2421          UK     200   0.008   0.200     100
2422          RK    2680   0.008   0.025   0.031    TRAP       3      20
2423          RK    2600  0.0051   0.040            TRAP       3      50

2424          KK   C3251
2425          KM          COMBINE FLOWS FROM S3250, R3247, AND R3243
2426          HC       3

2427          KK  DV3253
2428          KM          DIVERT 60% OF COMBINED RUNOFFS S. ALONG HIGHLEY TO R3275
2429          DT   D3253
2430          DI       0      10   10000
2431          DQ       0       6    6000

2432          KK   R3255
2433          KM          ROUTE HYDROGRAPH DV3253 TO C3261
2434          RK    1800  0.0061   0.040            TRAP       4       6     YES

2435          KK   S3260
2436          KM          RUNOFF FROM SUBBASIN S3260
2437          BA   0.242
2438          LS              82
2439          UK     200   0.004   0.200     100
2440          RK    2800   0.006   0.025   0.030    TRAP       3      20
2441          RK    2200  0.0015   0.025            TRAP     110       3

2442          KK    EMF3
2443          KM          COMBINE FLOWS FROM S3260, R3255, AND R3205
2444          HC       3

2445          KK   R3263
2446          KM          ROUTE COMBINED FLOWS C3261 TO EMF4
2447          RK    3400 0.00015   0.025            TRAP     110       3     YES

2448          KK   D3229
2449          KM          RETRIEVE DIVERTED HYDROGRAPH D3229
2450          DR   D3229

2451          KK   D3233
2452          KM          RETRIEVE DIVERTED HYDROGRAPH D3233
2453          DR   D3233
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2454          KK   C3265
2455          KM          COMBINE RETRIEVED HYDROGRAPHS D3233 AND D3229
2456          HC       2    .001

2457          KK   R3267
2458          KM          ROUTE HYDROGRAPH C3265 TO C3271
2459          RK    3400   0.006   0.025            TRAP       2      10     YES
2460          RK    1600   0.006   0.025            TRAP      20      20

2461          KK   S3270
2462          KM          RUNOFF FROM SUBBASIN S3270
2463          BA   0.164
2464          LS             80
2465          UK     200  0.0044   0.200     100
2466          RK    3400   0.006   0.025    0.02    TRAP       3      20
2467          RK    1600   0.008   0.025            TRAP      20      10

2468          KK   C3271
2469          KM          COMBINE FLOWS FROM S3270 AND R3267
2470          HC       2

2471          KK   R3273
2472          KM          ROUTE HYDROGRAPH C3271 TO C3281
2473          RK    2100  0.0065   0.035            TRAP      10       3     YES

2474          KK   D3253
2475          KM          RETRIEVE DIVERTED HYDROGRAPH D3253
2476          DR   D3253

2477          KK   R3275
2478          KM          ROUTE RETRIEVED HYDROGRAPH D3253 TO C3281
2479          RK    2200  0.0044   0.025            TRAP       3      50

2480          KK   S3280
2481          KM          RUNOFF FROM SUBBASIN S3280
2482          BA   0.207
2483          LS             93
2484          UK     300   0.006   0.200     100
2485          RK    2000   0.005   0.025   0.026    TRAP       3      20
2486          RK    2200   0.006   0.025            TRAP      20      10

2487          KK   C3281
2488          KM          COMBINE RUNOFFS FROM S3280, R3275, AND R3273
2489          HC       3

2490          KK   S3284
2491          KM          RUNOFFS FROM SUBBASIN S3284
2492          BA   0.201
2493          LS             95
2494          UK     200   0.004   0.200     100
2495          RK    1700   0.006   0.025    0.04    TRAP       3      20
2496          RK    3000 0.00015   0.025            TRAP     110       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2497          KK    EMF4
2498          KM          COMBINE RUNOFFS FROM S3284, C3281, AND R3263
2499          HC       3

2500          KK   S3288
2501          KM          RUNOFF FROM SUBBASIN S3288
2502          BA    0.08
2503          LS             86
2504          UK     100   0.003   0.200     100
2505          RK    4000  0.0035   0.040            TRAP       3       2

2506          KK   C3289
2507          KM          COMBINE FLOWS FROM S3288 AND EMF4
2508          HC       2

2509          KK   R3291
2510          KM          ROUTE COMBINED RUNOFF C3289 TO EMF5
2511          RK    3300  0.0003   0.025            TRAP      90       3     YES

2512          KK   S3294
2513          KM          RUNOFFS FROM SUBBASIN S3294 (AT CONC. BOX CULV.)
2514          BA   0.186
2515          LS             89
2516          UK     250  0.0057   0.200     100
2517          RK    4200   0.007   0.025            TRAP       3      20

2518          KK   R3295
2519          KM          ROUTE HYDROGRAPH S3294 TO C3301
2520          RK    3400  0.0075   0.025            TRAP       3      20     YES

2521          KK   D2419
2522          KM          RETRIEVE DIVERTED HYDROGRAPH D2419
2523          DR   D2419

2524          KK   R3297
2525          KM          ROUTE DIVERTED HYDROGRAPH D2419 TO C3301 ALONG BROADWAY RD.
2526          RK    2600  0.0067   0.016            TRAP    19.0       2

2527          KK   S3300
2528          KM          RUNOFFS FROM SUBBASIN S3300
2529          BA    0.25
2530          LS             89
2531          UK     200   0.005   0.200     100
2532          RK    4800  0.0067   0.025            TRAP       3      20

2533          KK   C3301
2534          KM          COMBINE FLOWS FROM S3300, R3297, AND R3295
2535          HC       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2536          KK   R3303
2537          KM          ROUTE HYDROGRAPHS C3301 TO C3317 ALONG BROADWAY RD.
2538          RK    1400  0.0067   0.016            TRAP      19       2     YES

2539          KK   D3223
2540          KM          RETRIEVE DIVERTED HYDROGRAPH D3223
2541          DR   D3223

2542          KK   R3305
2543          KM          ROUTE RETRIEVED HYDROGRAPH D3223 TO C3311 AT BOX CULVERT
2544          RK    3800   0.007   0.025            TRAP       3      20

2545          KK   S3310
2546          KM          RUNOFFS FROM SUBBASIN S3310
2547          BA    0.20
2548          LS              91
2549          UK     100  0.0057   0.200     100
2550          RK    3600   0.007   0.025   0.025    TRAP       3      20
2551          RK    1200   0.005   0.050            TRAP      20      20

2552          KK   C3311
2553          KM          COMBINE FLOWS FROM S3310 AND R3305
2554          HC       2

2555          KK   R3313
2556          KM          ROUTE HYDROGRAPH C3311 TO C3317
2557          RK    2700   0.006   0.030            TRAP      10       2     YES

2558          KK   S3316
2559          KM          RUNOFF FROM SUBBASIN S3316
2560          BA    0.14
2561          LS              86
2562          UK     100   0.018   0.200     100
2563          RK    1900   0.012   0.020            TRAP      10      20
2564          RK    2000   0.006   0.040            TRAP      10       2

2565          KK   C3317
2566          KM          COMBINE HYDROGRAPHS S3316, R3313, AND R3303 AT BROADWAY RD.(C3317)
2567          HC       3

2568          KK   R3319
2569          KM          ROUTE COMBINED HYDROGRAPHS C3317 TO C3321 ALONG BROADWAY RD.
2570          RK    1400  0.0067   0.016            TRAP      19       2     YES

2571          KK   S3320
2572          KM          RUNOFFS FROM SUBBASIN S3320
2573          BA   0.126
2574          LS              89
2575          UK     200   0.018   0.200     100
2576          RK     800   0.007   0.045   0.015    TRAP      20      20
2577          RK    2800  0.0065   0.025            TRAP       3      20
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2578          KK   C3321
2579          KM          COMBINE HYDROGRAPHS S3320 AND R3319
2580          HC       2

2581          KK   R3323
2582          KM          ROUTE COMBINED HYDROGRAPHS C3321 TO C3331
2583          RK    1300  0.0067   0.016            TRAP      19       2     YES

2584          KK   S3326
2585          KM          RUNOFFS FROM SUBBASIN S3326
2586          BA   0.151
2587          LS              91
2588          UK     150   0.006   0.200     100
2589          RK    2200   0.010   0.025    0.07    TRAP       3      20
2590          RK    1800  0.0095   0.045            TRAP      10       3

2591          KK  DV3327
2592          KM          DIVERT 50% OF FLOW W. INTO R3335
2593          DT   D3327
2594          DI       0      10    1000
2595          DQ       0       5    5000

2596          KK   R3328
2597          KM          ROUTE HYDROGRAPH DV3327 TO C3331
2598          RK    2700   0.006   0.030            TRAP      10       2     YES

2599          KK   S3330
2600          KM          RUNOFFS FROM SUBBASIN S3330
2601          BA   0.136
2602          LS              95
2603          UK     200   0.006   0.200     100
2604          RK    3800  0.0063   0.030            TRAP      10       2

2605          KK   C3331
2606          KM          COMBINE HYDROGRAPHS S3330, R3328, AND R3323
2607          HC       3

2608          KK   R3333
2609          KM          ROUTE COMBINED HYDROGRAPHS C3331 TO C3341 ALONG BROADWAY RD.
2610          RK    1200  0.0067   0.016            TRAP      19       2     YES

2611          KK   D3327
2612          KM          RETRIEVE DIVERTED HYDROGRAPH D3327
2613          DR   D3327

2614          KK   R3335
2615          KM          ROUTE RETRIEVED HYDROGRAPH D3327 TO C3341
2616          RK    1500   0.008   0.045            TRAP      20      20
2617          RK    2000   0.005   0.025            TRAP       3      20
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2618          KK   S3340
2619          KM          RUNOFFS FROM SUBBASIN S3340
2620          BA   0.115
2621          LS             86
2622          UK     200   0.005   0.200     100
2623          RK    1500   0.008   0.045    0.05    TRAP      20      20
2624          RK    2000   0.005   0.025            TRAP       3      20

2625          KK   C3341
2626          KM          COMBINE HYDROGRAPHS S3340, R3335, AND R3333
2627          HC       3

2628          KK   R3343
2629          KM          ROUTE COMBINED HYDROGRAPHS C3341 TO C3347 ALONG BROADWAY RD.
2630          RK    1000  0.0067   0.016            TRAP      19       2     YES

2631          KK   S3346
2632          KM          RUNOFFS FROM SUBBASIN S3346
2633          BA   0.184
2634          LS             90
2635          UK     250   0.005   0.200     100
2636          RK    2600  0.0045   0.025   0.023    TRAP       3      20
2637          RK    2800  0.0003   0.025            TRAP      90       3

2638          KK    EMF5
2639          KM          COMBINE HYDROGRPHS S3346, R3343, AND R3291
2640          HC       3

2641          KK  DV3349
2642          KM        DIVERT 100% OF FLOWS OUT OF SYSTEM TO R4515
2643          DT   D3349
2644          DI       0  100000
2645          DQ       0  100000
              *       EAST COUNTY AREA DRAINAGE STUDY BETWEEN BROADWAY RD. AND GUADALUPE RD.

2646          KK   D2030
2647          KM        FLOW FROM D2030 BY EADMS142
2648          DR   D2030

2649          KK  DV4001
2650          KM        DIVERT 90% OF THE RUNOFF E. INTO THE R4043
2651          DT   D4001
2652          DI       0     500    1000    2000    3000
2653          DQ       0     450     900    1800    2700

2654          KK   R4003
2655          KM        ROUTE DV4001 ALONG IDAHO RD. TO C4005
2656          RK    2400   0.013   0.040            TRAP       2       2     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2657          KK   S4004
2658          KM        RUNOFF FROM SUBBASIN S4004
2659          BA   0.038
2660          LS              77
2661          UK     300  0.0081   0.200     100
2662          RK    3600   0.010   0.040            TRAP       2       4

2663          KK   C4005
2664          KM        COMBINE FLOWS FROM S4004 AND R4003
2665          HC       2

2666          KK  DV4007
2667          KM        DIVERT 50% OF FLOWS ACROSS 16TH AVE THROUGH IDAHO RD
2668          DT   D4007
2669          DI       0     100     200     300
2670          DQ       0      50     100     150

2671          KK   R4009
2672          KM        ROUTE DV4007 TO C4011
2673          RK    2600  0.0081   0.035            TRAP       2      15

2674          KK   S4010
2675          KM        RUNOFF FROM SUBBASIN S4010
2676          BA   0.152
2677          LS              87
2678          UK     300  0.0080   0.200     100
2679          RK    4600  0.0107   0.035            TRAP       1      15

2680          KK   C4011
2681          KM        COMBINE FLOWS FROM S4010 AND R4009
2682          HC       2

2683          KK  DV4013
2684          KM        DIVERT 25% OF THE FLOWS SOUTH TO R4017
2685          DT   D4013
2686          DI       0     100     200     400     600     800    1000
2687          DQ       0      25      50     100     150     200     250

2688          KK   R4015
2689          KM        ROUTE FLOWS DV4013 THROUGH R4017 AND S3020 TO C4021
2690          RK     600  0.0080   0.035            TRAP       2      15
2691          RK    2900  0.0107   0.040            TRAP      15       3

2692          KK   D4013
2693          KM        RETRIEVE DIVERTED HYDROGRAGH D4013
2694          DR   D4013

2695          KK   R4017
2696          KM        ROUTE FLOWS THROUGH SUBBASIN S3020 TO C4021
2697          RK    3300  0.0107   0.040            TRAP      15       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2698          KK   S4020
2699          KM        RUNOFF FROM SUBBASIN S3020 AND R4017
2700          BA    0.18
2701          LS              77
2702          UK     300  0.0080   0.200     100
2703          RK    3200  0.0107    0.04            TRAP      10       3

2704          KK   C4021
2705          KM        COMBINE FLOWS FROM S3020, R4017, AND R4015
2706          HC       3

2707          KK   R4023
2708          KM        ROUTE HYDROGRAPH THROUGH SUBBASIN S4024 TO C4025
2709          RK    2700   0.010   0.040            TRAP      15       3

2710          KK   S4024
2711          KM        RUNOFF FROM SUBBASIN S4024
2712          BA    0.13
2713          LS              77
2714          UK     500  0.0072   0.200     100
2715          RK    3200   0.010   0.040            TRAP      10       3

2716          KK   C4025
2717          KM        COMBINE FLOWS FROM S4024 AND R4023
2718          HC       2

2719          KK   R4027
2720          KM        ROUTE HYDROGRAPH C4025 TO THE SUPERSTITION FWY AT C4035 BY CVL
2721          RK    2600   0.005   0.040            TRAP      10      30

2722          KK   S4028
2723          KM        RUNOFF FROM SUBBASIN S4028
2724          BA    0.12
2725          LS              81
2726          UK     100   0.007   0.200     100
2727          RK    4100  0.0107   0.040            TRAP      15       3

2728          KK   R4029
2729          KM        ROUTE FLOWS FROM S4028 THROUGH S4034
2730          RK    5400  0.0072   0.040            TRAP      10       3     YES

2731          KK   S4030
2732          KM       RUNOFF FROM SUBBASIN S4030
2733          BA  0.0907
2734          LS              80
2735          UK     400  0.0070   0.200     100
2736          RK    3100  0.0107   0.040            TRAP     3.5     1.5

2737          KK   R4031
2738          KM        ROUTE HYDROGRAPH S4030 THROUGH S4034
2739          RK    3000  0.0040    0.04            TRAP     3.5     1.5     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2740          KK   S4034
2741          KM        RUNOFF FROM SUBBASIN S4034
2742          BA    0.31
2743          LS              85
2744          UK     500  0.0175   0.200     100
2745          RK    2000  0.0063   0.035            TRAP     2      15
2746          RK    2800  0.0048   0.040            TRAP    10       3

2747          KK   C4035
2748          KM        COMBINE HYDROGRAPHS S4034, R4031, R4029, AND R4027
2749          HC       4

2750          KK  DV4037
2751          KM        STORE HYDROGRAPH IN D4037 (A-N WEST D204) TO R4561
2752          DT   D4037
2753          DI       0   10000
2754          DQ       0   10000

2755          KK   S4040
2756          KM        RUNOFF FROM SUBBASIN S4040 AT IRONWOOD AND FREEEWAY
2757          BA   0.089
2758          LS              79
2759          UK     650  0.0081   0.200     100
2760          RK    1500   0.010   0.040    0.03    TRAP      2       4
2761          RK    2000   0.004    0.02            TRAP    3.5     1.5

2762          KK  DV4041
2763          KM        DIVERT 100% OF RUNOFF FROM S4040 OUT TO R4536  (A-N WEST DIV 200)
2764          DT   D4041
2765          DI       0   10000
2766          DQ       0   10000

2767          KK   D4001
2768          KM        FLOW FROM CHANNEL DIVERSION D4001 RETURNED TO SYSTEM
2769          DR   D4001

2770          KK   R4043
2771          KM        ROUTE FLOWS FROM D4001 THROUGH S4044
2772          RK    3100  0.0107   0.035            TRAP    15.0       2

2773          KK   S4044
2774          KM        RUNOFF FROM SUBBASIN S4044
2775          BA   0.085
2776          LS              89
2777          UK     500  0.0080   0.200     100
2778          RK    2700  0.0107   0.035            TRAP      15       3

2779          KK   C4045
2780          KM        COMBINE FLOWS FROM S4044 AND R4043
2781          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2782          KK   R4047
2783          KM        ROUTE HYDROGRAPH C4045 THROUGH S4060 TO C4061
2784          RK    2700  0.0107   0.040            TRAP      15       3

2785          KK   D2039
2786          KM        RUNOFF FROM D2039 BY EADMS142
2787          DR   D2039

2788          KK   R4049
2789          KM        ROUTE D2039 THROUGH S4050
2790          RK    1500  0.0107   0.040            TRAP      10       3

2791          KK   S4050
2792          KM        RUNOFF FROM SUBBASIN S4050
2793          BA   0.038
2794          LS             77
2795          UK     100  0.0080   0.200     100
2796          RK    1600  0.0107   0.040            TRAP      10       3

2797          KK   C4051
2798          KM        COMBINE FLOWS FROM S4050 AND R4049
2799          HC       2

2800          KK   R4053
2801          KM        ROUTE HYDROGRAPH C4051 TO C4061 THROUGH SUBBASIN S4060
2802          RK    3300  0.0107   0.040            TRAP      10       3     YES

2803          KK   D2043
2804          KM        RUNOFF FROM D2043 BY EADMS142
2805          DR   D2043

2806          KK   R4055
2807          KM        ROUTE D2043 HYDROGRAPH THROUGH S4060 TO C4061
2808          RK    4200  0.0107   0.040            TRAP      10       3

2809          KK   D2063
2810          KM        FLOWS FROM D2063 RETURNED TO SYSTEM
2811          DR   D2063

2812          KK   R4057
2813          KM        ROUTE HYDROGRAPH D2063 THROUGH S4060 TO C4061
2814          RK    3200  0.0107   0.040            TRAP      10       3

2815          KK   S4060
2816          KM        RUNOFF FROM SUBBASIN S4060
2817          BA    0.21
2818          LS             85
2819          UK     600  0.0080   0.200     100
2820          RK    3400  0.0107   0.040            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2821          KK   C4061
2822          KM        COMBINE HYDROGRAPHS FROM S4060, R4057, R4055, R4053, AND R4047
2823          HC       5

2824          KK   D2076
2825          KM        FLOWS FROM D2077 RETURNED TO SYSTEM
2826          DR   D2076

2827          KK   R4063
2828          KM        ROUTE HYDROGRAPH D2077 THROUGH S4060 TO C4065  (ALONG IRONWOOD)
2829          RK    3200  0.0107   0.035            TRAP      50       2

2830          KK   C4065
2831          KM        COMBINE HYDROGRAPHS FROM R4063 AND C4061
2832          HC       2

2833          KK   R4067
2834          KM        ROUTE C4065 HYDROGRAPH THROUGH S4080 TO C4081
2835          RK    3000  0.0107   0.045            TRAP      10       3

2836          KK   S4068
2837          KM        RUNOFF FROM SUBBASIN S4068
2838          BA    0.14
2839          LS              85
2840          UK     300  0.0080   0.200     100
2841          RK    3400  0.0107   0.040            TRAP      10       3

2842          KK   R4069
2843          KM        ROUTE S4068 HYDROGRAPH THROUGH SUBBASIN S4080 TO C4081
2844          RK    1600  0.0107   0.040            TRAP      10       3     YES

2845          KK   D2095
2846          KM        FLOWS FROM D2095 RETURNED TO STSTEM
2847          DR   D2095

2848          KK   R4071
2849          KM        ROUTE D2095 THROUGH S4074 TO C4075
2850          RK    2600  0.0107   0.035            TRAP       2      15

2851          KK   S4074
2852          KM        RUNOFF FROM SUBBASIN S4074
2853          BA    0.12
2854          LS              86
2855          UK     300  0.0080   0.200     100
2856          RK    3500  0.0107   0.035            TRAP       2      15

2857          KK   C4075
2858          KM        COMBINE HYDROGRAPHS FROM S4074 AND R4071
2859          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2860          KK  DV4077
2861          KM        DIVERT 30% OF FLOWS INTO R4115
2862          DT   D4077
2863          DI       0       1      50   10000
2864          DQ       0       1      15    3000

2865          KK   R4079
2866          KM        ROUTE HYDROGRAPH DV4077 THROUGH S4080 TO C4081
2867          RK    1200  0.0101    0.04            TRAP      10       3

2868          KK   S4080
2869          KM        RUNOFF FROM SUBBASIN S4080
2870          BA    0.11
2871          LS              77
2872          UK     300   0.008   0.200     100
2873          RK    2200  0.0107    0.04            TRAP       2       4

2874          KK   C4081
2875          KM        COMBINE HYDROGRAPHS FROM S4080, R4079, R4069, AND R4067
2876          HC       4

2877          KK  DV4083
2878          KM        DIVERT 30% OF FLOWS INTO R4085
2879          DT   D4083
2880          DI       0     100     200     400     600     800    1000
2881          DQ       0      30      60     120     180     240     300

2882          KK   R4085
2883          KM        ROUTE HYDROGRAPH DV4083 THROUGH S4090 TO C4091
2884          RK    2900  0.0101   0.040            TRAP      10       3

2885          KK  DV4087
2886          KM        DIVERT 30% OF FLOWS INTO SUBBASIN S4126
2887          DT   D4087
2888          DI       0     100     200     400     600     800    1000
2889          DQ       0      30      60     120     180     240     300

2890          KK   R4089
2891          KM        ROUTE HYDROGRAPH DV4087 TO OVERCHUTE 13 (C4091)
2892          RK    1600  0.0101   0.404            TRAP      10       3

2893          KK   S4090
2894          KM        RUNOFF FROM SUBBASIN S4090
2895          BA    0.21
2896          LS              77
2897          UK     400  0.0072   0.200     100
2898          RK    4600   0.010   0.040            TRAP      10       3

2899          KK   C4091
2900          KM        COMBINE HYDROGRAPHS S4090 AND R4089 AT OVERCHUTE 13 (C4091)
2901          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2902          KK   B4093
2903          KM        ***ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #13***
2904          RS       1    ELEV      68
2905          SV       0    1.71    5.71   11.37   32.56
2906          SQ       0       0    1123    1375    1776
2907          SE      68      70      73      74      76

2908          KK   R4095
2909          KM        ***ROUTE HYDROGRAPH FROM NORTH OF CAP TO SOUTH THROUGH 5-72"***
2910          RK     120  0.0035   0.015            TRAP      22       0

2911          KK   S4100
2912          KM        RUNOFF FROM SUBBASIN S4100 (FWY BY A-N WEST SUB208)
2913          BA    0.10
2914          LS              76
2915          UK     500   0.023   0.200     100
2916          RK    1900    0.01   0.040    0.03    TRAP       2       4
2917          RK     885   0.040   0.016            TRAP     9.3     1.5

2918          KK   S4102
2919          KM        RUNOFF ONTO CAP SOUTH DETENTION BASIN AREA (FWY BY CVL)
2920          BA    0.07
2921          LS              85
2922          UD    0.15

2923          KK   C4103
2924          KM        COMBINE FLOWS S4102, S4100, AND R4095
2925          HC       3

2926          KK   B4105
2927          KM        ROUTE COMBINED FLOWS THROUGH CAP SOUTH DETENTION BASIN (FWY BY CVL)
2928          RS       1    ELEV    49.5
2929          SV       0     300     340
2930          SE    49.5      60      61
2931          SL    49.5   28.27     0.6     0.5
2932          SS      60     200     2.6     1.5

2933          KK  DV4107
2934          KM        DIVERT TO REMOVE HYDROGRAPH FROM STACK (FWY BY CVL) TO R4637
2935          DT   D4107
2936          DI       0    1000    5000
2937          DQ       0    1000    5000

2938          KK   S4110
2939          KM        RUNOFF FROM SUBBASIN S41110 (SUB 206 - CVL)
2940          BA    0.06
2941          LS              77
2942          UK     500   0.023   0.200     100
2943          RK    1600   0.013   0.040   0.043    TRAP       2       4
2944          RK    1835   0.040   0.016            TRAP     9.3     1.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2945          KK   C4111
2946          KM        COMBINE HYDROGRAGHS S4110, DV4107, DV4041, AND DV4037
2947          HC       4

2948          KK  DV4113
2949          KM        STORE HYDROGRAPH IN D4113 TO R4559
2950          DT   D4113
2951          DI       0   10000
2952          DQ       0   10000

2953          KK   S4114
2954          KM        RUNOFF FROM SUBBASIN S4114
2955          BA    0.15
2956          LS              84
2957          UK     200  0.0081   0.200     100
2958          RK    2500   0.065   0.020   0.018    TRAP       2      15
2959          RK    2900   0.010   0.040            TRAP      10       3

2960          KK   D4077
2961          KM        FLOWS FROM D4077 RETURNED TO SYSTEM
2962          DR   D4077

2963          KK   R4115
2964          KM        ROUTE D4077 THROUGH S4114 TO C4117
2965          RK    3000   0.010   0.040            TRAP      10       3

2966          KK   C4117
2967          KM        COMBINE HYDROGRAPHS FROM S4114 AND R4115
2968          HC       2

2969          KK   R4119
2970          KM        ROUTE HYDROGRAPHS THROUGH S4126 TO C4127
2971          RK    2000   0.010   0.040            TRAP      10       3

2972          KK   S4120
2973          KM        RUNOFF FROM SUBBASIN S4120
2974          BA   0.076
2975          LS              82
2976          UK     200  0.0081   0.200     100
2977          RK    1300   0.065   0.020   0.009    TRAP       2      15
2978          RK    1600   0.010   0.040            TRAP      10       3

2979          KK   R4121
2980          KM        ROUTE HYDROGRAPH S4120 THROUGH S4126 TO THE CAP OVERCHUTE #12 (C4127)
2981          RK    2600   0.010   0.040            TRAP      10       3     YES

2982          KK   D4087
2983          KM        FLOWS FROM D4087 RETURNED TO SYSTEM
2984          DR   D4087
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2985          KK   R4123
2986          KM        ROUTE HYDROGRAPH D4087 THROUGH S4126 TO THE CAP OVERCHUTE #12 (C4127)
2987          RK    1600   0.070   0.040            TRAP      10       3

2988          KK   S4126
2989          KM        RUNOFF FROM SUBBASIN S4126
2990          BA   0.154
2991          LS             79
2992          UK     100  0.0065   0.200     100
2993          RK    1800  0.0060   0.020   0.002    TRAP       2      15
2994          RK    2000  0.0090   0.040            TRAP      10       3

2995          KK   C4127
2996          KM        COMBINE HYDROGRAPHS FROM S4126, R4123, R4121, AND R4119
2997          HC       4

2998          KK   B4129
2999          KM        <<<<< ROUTE HYDROGRAGH THROUGH BASIN OVERCHUTE #12 >>>>>
3000          RS       1    ELEV      64
3001          SV       0    2.53    4.46   11.27   27.16
3002          SQ       0     540    1025    1550    1900
3003          SE      64      68      70      74

3004          KK   R4131
3005          KM        <<<<< ROUTE HYDROGRAGH FROM NORTH OF CAP TO THE SOUTH THROUGH 5-77" >>>>
3006          RK     120  0.0035   0.015           CIRC       20

3007          KK   S4132
3008          KM        RUNOFF FROM SUBBASIN S4132
3009          BA   0.134
3010          LS             87
3011          UK     300  0.0081   0.200     100
3012          RK    3700  0.0061   0.030            TRAP       2      15

3013          KK   D2112
3014          KM        RUNOFF FROM D2113 RETURNED TO SYSTEM
3015          DR   D2112

3016          KK  DV4133
3017          KM        DIVERT 70% OF THE RUNOFF INTO R4145
3018          DT   D4133
3019          DI       0     100     200     400     600     800    1000
3020          DQ       0      70     140     280     420     560     700

3021          KK   R4135
3022          KM        ROUTE HYDROGRAPH DV4133 TO THE N. E. CORNER OF M. H. PARK (DV4137)
3023          RK    1600  0.0061   0.020            TRAP       2      25

3024          KK  DV4137
3025          KM        ROUTE 40% OF THE RUNOFF INTO S4156
3026          DT   D4137
3027          DI       0     200     400     600     800    1000
3028          DQ       0      80     160     240     320     400
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3029          KK   R4139
3030          KM        ROUTE HYDROGRAPH DV4137 THROUGH MERIDIAN RD TO C4141
3031          RK     100  0.0061   0.020            TRAP       2      25

3032          KK   C4141
3033          KM        COMBINE HYDROGRAPHS FROM R4139 AND S4132
3034          HC       2

3035          KK   R4143
3036          KM        ROUTE HYDROGRAPH TO C4159
3037          RK    2600  0.0066   0.020            TRAP       2      15

3038          KK   D4133
3039          KM        RUNOFF FROM D4133 RETURNED TO SYSTEM
3040          DR   D4133

3041          KK   R4145
3042          KM        ROUTE HYDROGRAPH D4133 THROUGH S4150 TO C4151
3043          RK    3900  0.0070   0.040            TRAP      10       3

3044          KK   D2131
3045          KM        RUNOFF FROM D2131 RETURNED TO SYSTEM
3046          DR   D2131

3047          KK   R4147
3048          KM        ROUTE HYDROGRAPH D2131 TO C4151
3049          RK    1300  0.0057   0.020            TRAP       2      15

3050          KK   S4150
3051          KM        RUNOFF FROM SUBBASIN S4150
3052          BA   0.266
3053          LS             79
3054          UK     200  0.0081   0.200     100
3055          RK    1300  0.0060   0.020   0.009    TRAP       2      15
3056          RK    1400  0.0060   0.020            TRAP      10       1

3057          KK   C4151
3058          KM        COMBINE HYDROGRPHS S4150, R4147, AND R4145
3059          HC       3

3060          KK  DV4153
3061          KM        DIVERT 20% OF RUNOFF INTO R4173
3062          DT   D4153
3063          DI       0     200     400     600     800    1000
3064          DQ       0      40      80     120     160     200

3065          KK   R4155
3066          KM        ROUTE HYDROGRAPH DV4153 TO C4159
3067          RK    1300   0.006   0.020            TRAP      10       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3068          KK   S4156
3069          KM        RUNOFF FROM SUBBASIN S4156
3070          BA   0.143
3071          LS              93
3072          UK     100  0.0066   0.200     100
3073          RK    2700  0.0065   0.020            TRAP       3      15

3074          KK   D4137
3075          KM        RETRIEVE DIVERTED HYDROGRAPH D4137 INTO THE SYSTEM
3076          DR   D4137

3077          KK   R4158
3078          KM        ROUTE HYDROGRAPH D4137 TO C4159
3079          RK    3900   0.007   0.040            TRAP      10       3

3080          KK   C4159
3081          KM        COMBINE HYDROGRAPHS R4158, S4156, R4155, AND R4143
3082          HC       4

3083          KK  DV4161
3084          KM        DIVERT 40% OF FLOWS INTO R4175
3085          DT   D4161
3086          DI       0     200     400     600     800    1000
3087          DQ       0      80     160     240     320     400

3088          KK   R4163
3089          KM        ROUTE HYDROGRAPH DV4161 TO CAP OVERCHUTE #11 (C4167)
3090          RK    1900  0.0060   0.040            TRAP      10       3

3091          KK   S4166
3092          KM        RUNOFF FROM SUBBASIN S4166
3093          BA   0.119
3094          LS              79
3095          UK     100   0.006   0.200     100
3096          RK    2100  0.0065   0.020  0.0043    TRAP       3      15
3097          RK    1200  0.0090   0.040            TRAP      10       3

3098          KK   C4167
3099          KM        COMBINE FLOWS FROM S4166 AND R4163 AT CAP OVERCHUTE #11 (C4167)
3100          HC       2

3101          KK   B4169
3102          KM        ***ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #11***
3103          RS       1    ELEV      61
3104          SV       0    8.43   24.76   49.39  106.77  161.53
3105          SQ       0     325    1300    1750    2150    2350
3106          SE      61      64      68      70      72      74

3107          KK   R4171
3108          KM        ***ROUTE HYDROGRAPH FROM NORTH OF CAP TO SOUTH THROUGH 5-72"
3109          RK     120  0.0035   0.015            TRAP      23       6
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3110          KK   D4153
3111          KM        FLOWS FROM D4153 RETURNED TO SYSTEM
3112          DR   D4153

3113          KK   R4173
3114          KM        ROUTE HYDROGRAPH D4153 THROUGH S4178 TO THE CAP OVERCHUTE #10 (C4179)
3115          RK    2400  0.0090   0.040            TRAP       2       4
3116          RK     800  0.0040   0.016            TRAP      10     1.5

3117          KK   D4161
3118          KM        FLOWS FROM D4161 RETURNED TO SYSTEM
3119          DR   D4161

3120          KK   R4175
3121          KM        ROUTE HYDROGRAPH D4161 THROUGH  S4178 TO THE CAP OVERCHUTE #10 (C4179)
3122          RK    1400  0.0090   0.040            TRAP       1       4

3123          KK   S4178
3124          KM        RUNOFF FROM SUBBASIN S4178
3125          BA   0.255
3126          LS             80
3127          UK     200  0.0070   0.200     100
3128          RK    3500  0.0090  0.0400   0.009    TRAP      10       3
3129          RK    2100  0.0040   0.016            TRAP      10     1.5

3130          KK   C4179
3131          KM        COMBINE FLOWS FROM S4178, R4175, AND R4173
3132          HC       3

3133          KK   B4181
3134          KM        ***ROUTE HYDROGRAPH THROUGH BASIN AT NORTH SIDE OF OVERCHUTE #10***
3135          RS       1    ELEV      61
3136          SV       0    8.43   24.76   49.39  106.77  161.53
3137          SQ       0     325    1300    1750    2150    2350
3138          SE      61      64      68      70      72      74

3139          KK   R4183
3140          KM        ***ROUTE HYDROGRAPH FROM NORTH OF CAP TO THE SOUTH THROUGH 5-72"***
3141          RK     120  0.0035   0.015            TRAP      23       0

3142          KK   C4185
3143          KM        COMBINE FLOWS FROM (R4183, R4171, R4131, AND DV4113) STR#10, STR#11, AND
3144          KM        STR#12 AT STR#12
3145          HC       4

3146          KK   S4186
3147          KM        RUNOFF ONTO CAP NORTH DETENTION BASIN EAST OF MERIDIAN AND FREEWAY (CVL)
3148          BA   0.225
3149          LS             85
3150          UD    0.18
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3151          KK   C4187
3152          KM        COMBINE FLOWS THROUGH CAP NORTH DETENTION BASIN (CVL)
3153          HC       2

3154          KK   B4189
3155          KM        ROUTE FLOWS THROUGH CAP NORTH DETENTION BASIN AT FWY & MERIDIAN RD
3156          KM        (FWY BY CVL)
3157          RS       1    ELEV      36
3158          SV       0   12.35    63.5   210.3   367.5   535.1  667.85  713.55
3159          SE      36      38      40      44      48      52      55      56
3160          SL    36.0   28.27     0.6     0.5
3161          SS      55     200     2.6     1.5

3162          KK   R4191
3163          KM        ROUTE ROBASIN OUTFLOW TO 1800 W. OF SIGNAL BUTTE (FWY BY CVL)
3164          RK    4400   0.004   0.015            TRAP       6       2     YES

3165          KK   S4194
3166          KM        RUNOFF FROM SUBBASIN S4194
3167          BA   0.089
3168          LS              77
3169          UK     600   0.007   0.200     100
3170          RK    2200  0.0064   0.040            TRAP       2       4
3171          RK    3000  0.0064   0.040            TRAP      10       3

3172          KK   S4196
3173          KM        RUNOFF FROM SUBBASIN S4196
3174          BA   0.212
3175          LS              77
3176          UK     600   0.007   0.200     100
3177          RK    3800  0.0064   0.040            TRAP      10       3

3178          KK   C4197
3179          KM        COMBINE S4196, S4194, AND R4191 AND CROSS UNDER FREEWAY
3180          HC       3

3181          KK  DV4199
3182          KM        DIVERT 100% OF RUNOFF S. ACROSS FWY. TO R4657
3183          DT   D4199
3184          DI       0  100000
3185          DQ       0  100000

3186          KK   S4200
3187          KM        RUNOFF FROM S4200 AND ROUTE TO C4203
3188          BA   0.151
3189          LS              77
3190          UK     400   0.005   0.200     100
3191          RK    3200  0.0074   0.040            TRAP       2       4
3192          RK    3400  0.0067   0.040            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3193          KK   S4202
3194          KM        RUNOFF FROM SUBBASIN S4202
3195          BA   0.181
3196          LS             77
3197          UK     400  0.0047   0.200     100
3198          RK    3800  0.0067   0.040           TRAP       2       4

3199          KK   C4203
3200          KM        COMBINE FLOWS FROM S4200 AND S4202
3201          HC       3

3202          KK   R4205
3203          KM        ROUTE HYDROGRAPH TO C4221 ALONG FWY CHANNEL (FWY BY CVL)
3204          RK     100  0.0033   0.016           TRAP     7.5       3

3205          KK   D2157
3206          KM        HYDROGRAPH FROM D2157 RETURNED TO SYSTEM
3207          DR   D2157

3208          KK   R4207
3209          KM        ROUTE HYDROGRAPH D2157 TO CAP STR #9 (C4211)
3210          RK    2200   0.009   0.040           TRAP      10       3

3211          KK   S4210
3212          KM        RUNOFF FROM SUBBASIN S4210 AT CAP STR #9 (C4211)
3213          BA   0.157
3214          LS             79
3215          UK     200  0.0057   0.200     100
3216          RK    2400  0.0074   0.040           TRAP       2       4

3217          KK   C4211
3218          KM        COMBINE S4210 AND R4207 AT STR #9 (C4211)
3219          HC       2

3220          KK   B4213
3221          KM        ***ROUTE HYDROGRAPH THROUGH BASIN NORTH OF OVERCHUTE #9***
3222          DT   B4213       1
3223          DI       0      10   10000
3224          DQ       0       1       1

3225          KK   R4215
3226          KM        ***ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #8 BY 5-72"***
3227          RK     120  0.0035   0.016           TRAP      20       0
3228          RK    4000  0.0074   0.040           TRAP      10       3

3229          KK   S4216
3230          KM        RUNOFF FROM SUBBASIN S4216
3231          BA   0.225
3232          LS             77
3233          UK     500  0.0057   0.200     100
3234          RK    4200  0.0074   0.040           TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3235          KK   C4217
3236          KM        COMBINE HYDROGRAPHS FROM S4216 AND R4215
3237          HC       2

3238          KK   R4219
3239          KM        ROUTE HYDROGRAPH TO C4221
3240          RK    3200  0.0064   0.040            TRAP      10       3

3241          KK   S4220
3242          KM        RUNOFF FROM SUBBASIN S4220
3243          BA   0.099
3244          LS             77
3245          UK     400  0.0047   0.200     100
3246          RK    3400  0.0064   0.040            TRAP      10       3

3247          KK   C4221
3248          KM        COMBINE FLOWS FROM S4220, R4219, AND R4205
3249          HC       3

3250          KK   R4223
3251          KM        ROUTE HYDROGRAPH C4221 TO C4255 ALONG FWY CHANNEL EAST OF CRISMON RD(CVL
3252          RK    3200  0.0033   0.016            TRAP     7.5       3

3253          KK   S4224
3254          KM        RUNOFF FROM SUBBASIN S4224
3255          BA   0.060
3256          LS             77
3257          UK     100  0.0047   0.200     100
3258          RK    2400  0.0067   0.040            TRAP       2       4

3259          KK   R4225
3260          KM        ROUTE HYDROGRAPH TO C4255
3261          RK    3400  0.0067   0.040            TRAP      10       3     YES
3262          RK    2000  0.0033   0.016            TRAP     7.5       3

3263          KK   S4226
3264          KM        RUNOFF FROM SUBBASIN S4226
3265          BA   0.178
3266          LS             77
3267          UK     500  0.0047   0.200     100
3268          RK    3400  0.0067   0.040            TRAP      10       3
3269          RK    2000  0.0033   0.016            TRAP     7.5       3

3270          KK   D2167
3271          KM        FLOWS FROM D2167 RETURNED TO SYSTEM
3272          DR   D2167

3273          KK   B4227
3274          KM        ***ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #8***
3275          DT   D4227       1
3276          DI       0      10   10000
3277          DQ       0       1       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3278          KK   R4229
3279          KM        ***ROUTE HYDROGRAPH TO THE SOUTH OF CAP BY 5-72"***
3280          RK     120  0.0035   0.015            TRAP      23       0
3281          RK    5800  0.0074   0.040            TRAP      10       3

3282          KK   S4230
3283          KM        RUNOFF FROM SUBBASIN S4230
3284          BA   0.263
3285          LS             77
3286          UK     500  0.0057   0.200     100
3287          RK    5800  0.0074   0.040            TRAP      10       3

3288          KK   D2195
3289          KM         FLOWS FROM STR.#7 (D2195) RETURNED TO SYSTEM
3290          DR   D2195

3291          KK   R4231
3292          KM        ROUTE HYDROGRAPH D2195 THROUGH S4236
3293          RK    3700  0.0074   0.040            TRAP      10       3

3294          KK   D2213
3295          KM        FLOW FROM STR#6 AND S2210 RETURNED TO SYSTEM
3296          DR   D2213

3297          KK   R4233
3298          KM        ROUTE HYDROGRAPH THROUGH S4236 AND ALONG CRISMON RD TO C4237
3299          RK    3500  0.0050   0.020            TRAP      10       1

3300          KK   S4236
3301          KM        RUNOFF FROM SUBBASIN S4236
3302          BA   0.291
3303          LS             77
3304          UK     300  0.0057   0.200     100
3305          RK    4000  0.0074   0.040            TRAP      10       3

3306          KK   C4237
3307          KM        COMBINE FLOWS FROM S4236, R4233, AND R4231
3308          HC       3

3309          KK  DV4239
3310          KM        DIVERT 20% OF FLOWS TO C4257
3311          DT   D4239
3312          DI       0     200     400     600     800    1000
3313          DQ       0      40      80     120     160     200

3314          KK   R4241
3315          KM        ROUTE FLOWS FROM DV4239 TO C4245
3316          RK    1500  0.0050   0.020            TRAP      10       1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3317          KK   S4244
3318          KM        RUNOFF FROM SUBBASIN S4244
3319          BA   0.035
3320          LS             77
3321          UK     200  0.0060   0.200     100
3322          RK    2900  0.0074   0.040           TRAP       2       4

3323          KK   C4245
3324          KM        COMBINE FLOWS FROM S4244 AND R4241
3325          HC       2

3326          KK  DV4247
3327          KM        DIVERT 30% OF FLOWS TO R4269
3328          DT   D4247
3329          DI       0     200     400     600     800    1000
3330          DQ       0      60     120     180     240     300

3331          KK   R4249
3332          KM        ROUTE HYDROGRAPH DV4247 TO C4251
3333          RK     100  0.0050   0.020           TRAP      10       1

3334          KK   C4251
3335          KM        COMBINE FLOWS FROM R4249, S4230, AND R4229
3336          HC       3

3337          KK   R4253
3338          KM        ROUTE HYDROGRAPH C4251 TO C4255
3339          RK    3600  0.0074   0.040           TRAP      10       3

3340          KK   C4255
3341          KM        COMBINE FLOWS FROM R4253, S4226, R4225, AND R4223
3342          HC       4

3343          KK   D4239
3344          KM        RUNOFF FROM D4239 RETURNED TO SYSTEM
3345          DR   D4239

3346          KK   S4256
3347          KM        RUNOFF FROM SUBBASIN S4256
3348          BA   0.076
3349          LS             82
3350          UK     100  0.0050   0.200     100
3351          RK    1300  0.0050   0.020    0.02   TRAP       3      15
3352          RK    1900  0.0074   0.040           TRAP      10       3

3353          KK   C4257
3354          KM        COMBINE FLOWS FROM S4256 AND D4239
3355          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3356          KK   R4259
3357          KM        ROUTE HYDROGRAPH THROUGH S4260 TO C4273
3358          RK    2200  0.0090   0.040            TRAP      10       3
3359          RK    2400  0.0090   0.035            TRAP      10     1.5

3360          KK   S4260
3361          KM        RUNOFF FROM SUBBASIN S4260
3362          BA   0.121
3363          LS             83
3364          UK     100  0.0075   0.200     100
3365          RK    3400   0.005   0.020            TRAP       3      15

3366          KK   S4262
3367          KM        RUNOFF FROM SUBBASIN S4262
3368          BA   0.180
3369          LS             86
3370          UK     100  0.0057   0.200     100
3371          RK    4400  0.0057   0.020            TRAP       3      15

3372          KK  DV4263
3373          KM        DIVERT 20% OF RUNOFF FROM S4262 INTO THE WEST TO R4289
3374          DT   D4263
3375          DI       0     100     200     300
3376          DQ       0      20      40      60

3377          KK   R4265
3378          KM        ROUTE HYDROGRAPH DV4263 TO C4273
3379          RK    3500  0.0050   0.040            TRAP       5       2     YES

3380          KK  DV4267
3381          KM        DIVERT 15% OF FLOWS INTO S4304
3382          DT   D4267
3383          DI       0     100     200     300     400
3384          DQ       0      15      30      45      60

3385          KK   D4247
3386          KM        RETRIEVE DIVERTED HYDROGRAPH D4247 FROM S4244
3387          DR   D4247

3388          KK   R4269
3389          KM        ROUTE HYDROGRAPH THROUGH S4270 TO C4271
3390          RK    1400  0.0090   0.040            TRAP       5       3
3391          RK    1200  0.0090   0.035            TRAP      10       2

3392          KK   S4270
3393          KM        RUNOFF FROM SUBBASIN S4270
3394          BA   0.074
3395          LS             80
3396          UK     100  0.0075   0.200     100
3397          RK     200  0.0090   0.040    0.36    TRAP       5       3
3398          RK    2400  0.0090   0.035            TRAP      10       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3399          KK   C4271
3400          KM        COMBINE HYDROGRAPHS FROM S4270 AND R4269
3401          HC       2

3402          KK   C4273
3403          KM        COMBINE HYDROGRAPHS C4271, R4265, S4260, AND R4259
3404          HC       4

3405          KK   R4275
3406          KM        ROUTE HYDROGRAPH THROUGH S4310 TO C4311
3407          RK    2000  0.0050   0.040            TRAP      10       3     YES

3408          KK   D2251
3409          KM        RETRIEVE DIVERTED HYDROGRAPH D2251 FROM EADMS142
3410          DR   D2251

3411          KK   R4277
3412          KM        ROUTE D2251 TO C4281
3413          RK    4000  0.0060   0.040            TRAP      10       2

3414          KK   D2257
3415          KM        RETRIEVE DIVERTED HYDROGRAPH D2257 FROM EADMS142
3416          DR   D2257

3417          KK   R4279
3418          KM        ROUTE D2257 TO C4281
3419          RK    1400  0.0053   0.040            TRAP      10       3

3420          KK   S4280
3421          KM        RUNOFF FROM SUBBASIN S4280
3422          BA   0.129
3423          LS             83
3424          UK     140   0.005   0.200     100
3425          RK    1200   0.005   0.020   0.006    TRAP       3      15
3426          RK    2000  0.0075   0.040            TRAP      10       2

3427          KK   C4281
3428          KM        COMBINE HYDROGRAPHS FROM S4280, R4279, AND R4277
3429          HC       3

3430          KK   R4283
3431          KM        ROUTE HYDROGRAPH C4281 TO C4285
3432          RK    1000  0.0053   0.035            TRAP      10       2     YES

3433          KK  DV4285
3434          KM        DIVERT 100% OF FLOWS INTO THE SUBBASIN S4347
3435          DT   D4285
3436          DI       0     100     200     300     400     500
3437          DQ       0     100     200     300     400     500
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3438          KK   S4288
3439          KM        RUNOFFS FROM SUBBASIN S4288
3440          BA   0.133
3441          LS             86
3442          UK    140   0.005   0.200     100
3443          RK   1200   0.005   0.020   0.006    TRAP       3      15
3444          RK   2000  0.0075   0.040            TRAP      10       2

3445          KK   D4263
3446          KM        RETRIEVE DIVERTED HYDROGRAPH D4263
3447          DR   D4263

3448          KK   R4289
3449          KM        ROUTE HYDROGRAPH D4263 TO C4291
3450          RK   2000  0.0075   0.040            TRAP      10       2

3451          KK   C4291
3452          KM        COMBINE HYDROGRAPHS R4289, S4288, AND DV4285
3453          HC       3

3454          KK  DV4293
3455          KM        DIVERT 50% OF FLOWS TO THE WEST TO R4351
3456          DT   D4293
3457          DI       0      10   10000
3458          DQ       0       5    5000

3459          KK   R4295
3460          KM        ROUTE HYDROGRAPH TO C4297
3461          RK   1400  0.0053   0.040            TRAP      10       2

3462          KK   S4296
3463          KM        RUNOFF FROM SUBBASIN S4296
3464          BA   0.121
3465          LS             87
3466          UK    100   0.005   0.200     100
3467          RK   1600   0.005   0.020   0.006    TRAP       3      15
3468          RK   2300  0.0075   0.020            TRAP       3      15

3469          KK   C4297
3470          KM        COMBINE HYDROGRAPHS S4296 AND R4295
3471          HC       2

3472          KK  DV4299
3473          KM        DIVERT 20% OF FLOW TO THE S4320
3474          DT   D4299
3475          DI       0     200     400     600     800    1000
3476          DQ       0      40      80     120     160     200

3477          KK   R4301
3478          KM        ROUTE HYDROGRAPH TO C4305
3479          RK   1300  0.0053   0.040            TRAP      10       2     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3480          KK   D4267
3481          KM        RETRIEVE DIVERTED HYDROGRAGH D4267
3482          DR   D4267

3483          KK   R4303
3484          KM        ROUTE HYDROGRAPH TO C4305
3485          RK    8500  0.0080   0.040            TRAP       4       3

3486          KK   S4304
3487          KM        RUNOFF FROM SUBBASIN S4304
3488          BA   0.121
3489          LS             90
3490          UK     100  0.0050   0.200     100
3491          RK    1300   0.005   0.020   0.005    TRAP       3      15
3492          RK    2300  0.0075   0.040            TRAP       5       3

3493          KK   C4305
3494          KM        COMBINE HYDROGRAPHS S4304, R4303, AND R4301
3495          HC       3

3496          KK   R4307
3497          KM        ROUTE HYDROGRAPH C4305 TO BASIN AT FREEWAY AND ELLSWORTH RD. (C4311)
3498          RK    2200  0.0053   0.040            TRAP      10       3     YES

3499          KK   S4310
3500          KM        RUNOFF FROM SUBBASIN S4310
3501          BA   0.398
3502          LS             77
3503          UK     300   0.008   0.200     100
3504          RK    6000   0.008   0.040            TRAP      10       3

3505          KK   C4311
3506          KM        COMBINE FLOWS FROM S4310, R4307, R4275, AND C4255
3507          HC       4

3508          KK   B4313
3509          KM        ROUTE FLOW THROUGH ELLSWORTH DETENTION BASIN (24" EQUIV OUTLET PIPE)
3510          KM        (FRWY BY CVL)
3511          RS       1    ELEV      56
3512          SV       0     617     650
3513          SE      56      74      75
3514          SL      56    3.14     0.6     0.5
3515          SS      74     200     2.6     1.5

3516          KK   R4315
3517          KM        ROUTE OVERFLOW FROM ELLSWORTH & FWY DETENTION BASIN TO C4325
3518          RK    1400  0.0045   0.035            TRAP       2       3

3519          KK   D4299
3520          KM        RETRIEVE DIVERTED HYDROGRAPH D4299
3521          DR   D4299
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3522          KK   R4317
3523          KM        ROUTE HYDROGRAPH TO C4321
3524          RK    2800   0.007   0.040            TRAP       5       3

3525          KK   S4320
3526          KM        RUNOFF FROM SUBBASIN S4320
3527          BA   0.051
3528          LS             79
3529          UK     100  0.0053   0.200     100
3530          RK    2800  0.0070   0.040            TRAP       5       3

3531          KK   C4321
3532          KM        COMBINE HYDROGRAPHS S4320 AND R4317
3533          HC       2

3534          KK   R4323
3535          KM        ROUTE HYDROGRAPH TO C4325
3536          RK    2400  0.0025   0.040            TRAP       5       3

3537          KK   S4324
3538          KM        RUNOFF FROM SUBBASIN S4324
3539          BA   0.116
3540          LS             81
3541          UK     100  0.0025   0.200     100
3542          RK    3600   0.004   0.040            TRAP       5       3

3543          KK   C4325
3544          KM        COMBINE HYDROGRAGHS S4324, R4323, AND R4315
3545          HC       3

3546          KK   R4327
3547          KM        ROUTE HYDROGRAPH TO C4395
3548          RK    3900  0.0057    0.02            TRAP      10       2

3549          KK   S4330
3550          KM        RUNOFF FROM SUBBASIN S4330
3551          BA   0.101
3552          LS             80
3553          UK     100  0.0050   0.200     100
3554          RK    3800  0.0080    0.04            TRAP       5       3

3555          KK  DV4331
3556          KM        DIVERT 10% OF RUNOFF TO THE WEST TO R4335
3557          DT   D4331
3558          DI       0      50    1000
3559          DQ       0       5     100

3560          KK   R4333
3561          KM        ROUTE HYDROGRAGH DV4331 TO C4391
3562          RK    3000  0.0058   0.035            TRAP       5       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3563          KK   D4331
3564          KM        RETRIEVE DIVERTED HYDROGRAPH D4331
3565          DR   D4331

3566          KK   R4335
3567          KM        ROUTE HYDROGRAPH D4331 TO C4339
3568          RK     800  0.0072   0.020            TRAP       2       10

3569          KK   S4338
3570          KM        RUNOFF FROM SUBBASIN S4338
3571          BA   0.073
3572          LS              79
3573          UK     100  0.0075   0.200     100
3574          RK    3600  0.0088   0.040            TRAP       5        3

3575          KK   C4339
3576          KM        COMBINE FLOWS FROM S4338 AND R4335
3577          HC       2

3578          KK  DV4341
3579          KM        DIVERT HYDROGRAPH C4339 TO R4345
3580          DT   D4341
3581          DI       0       10   10000
3582          DQ       0        5    5000

3583          KK   R4343
3584          KM        ROUTE HYDROGRAGH DV4341 TO C4391
3585          RK    2800  0.0058   0.035            TRAP       5        3

3586          KK   D4341
3587          KM        RETRIEVE DIVERTED HYDROGRAPH D4341
3588          DR   D4341

3589          KK   R4345
3590          KM        ROUTE HYDROGRAPH D4341 TO C4357
3591          RK     800  0.0072   0.020            TRAP       3       10

3592          KK   S4347
3593          KM        RUNOFF FROM SUBBASIN S4347
3594          BA   0.131
3595          LS              38
3596          UK     100  0.0053   0.200     100
3597          RK    3400  0.0075   0.020            TRAP       3       15

3598          KK   D4285
3599          KM        RETRIEVE DIVERTED HYDROGRAPH D4285
3600          DR   D4285

3601          KK   R4349
3602          KM        ROUTE HYDROGRAPH TO C4353
3603          RK    2000  0.0075   0.020            TRAP      10        1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3604          KK   D4293
3605          KM        RETRIEVE DIVERTED HYDROGRAPH D4293
3606          DR   D4293

3607          KK   R4351
3608          KM        ROUTE HYDROGRAPH D4293 TO C4353
3609          RK    1500  0.0075   0.040            TRAP       4       3

3610          KK   C4353
3611          KM        COMBINE FLOWS FROM R4351, R4349, AND S4347
3612          HC       3

3613          KK   R4355
3614          KM        ROUTE HYDROGRAPH C4353 TO C4357
3615          RK    3600  0.0088   0.040            TRAP      10       3

3616          KK   S4356
3617          KM        RUNOFF FROM SUBBASIN S4356
3618          BA   0.085
3619          LS             77
3620          UK     100  0.0075   0.200     100
3621          RK    3500  0.0088   0.040            TRAP       5       3

3622          KK   C4357
3623          KM        COMBINE FLOWS FROM S4356, R4355, AND R4345
3624          HC       3

3625          KK  DV4359
3626          KM        DIVERT 5% OF FLOWS TO THE WEST C4385
3627          DT   D4359
3628          DI       0     100    1000
3629          DQ       0       5      50

3630          KK   R4361
3631          KM        ROUTE HYDROGRAPH DV4359 TO C4391
3632          RK    1700  0.0058   0.040            TRAP       5       3

3633          KK   S4364
3634          KM        RUNOFF FROM SUBBASIN S4364
3635          BA   0.176
3636          LS             77
3637          UK     100  0.0080   0.200     100
3638          RK    1200  0.0053   0.020   0.001    TRAP       3      10
3639          RK    2600  0.0060   0.040            TRAP      10       3

3640          KK  DV4365
3641          KM        DIVERT 80% OF FLOWS TO THE SOUTH TO R4381
3642          DT   D4365
3643          DI       0      50    1000
3644          DQ       0      40     800
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3645          KK   R4367
3646          KM        ROUTE DIVERTED HYDROGRAPH DV4365 TO C4377
3647          RK    3600  0.0075   0.040            TRAP       5       3

3648          KK   D2293
3649          KM        RETRIEVE DIVERTED HYDROGRAPH D2293 FROM EADMS142
3650          DR   D2293

3651          KK   R4369
3652          KM        ROUTE DIVERTED HYDROGRAPH D2293 TO C4377
3653          RK    2500  0.0045   0.040            TRAP      10       3
3654          RK    2500  0.0072   0.020            TRAP       3      10

3655          KK   D2317
3656          KM        RETRIEVE DIVERTED HYDROGRAPH D2317 FROM EADMS142
3657          DR   D2317

3658          KK   R4371
3659          KM        ROUTE DIVERTED HYDROGRAPH D2317 TO C4377
3660          RK    1300   0.005    0.04            TRAP       5       3
3661          RK    2400   0.006    0.02            TRAP       3      10

3662          KK   C4373
3663          KM        COMBINE HYDROGRAPHS R4371 AND R4369 TO EMPTY THE STACK
3664          HC       2    .001

3665          KK   D2327
3666          KM        RETRIEVE DIVERTED HYDROGRAPH D2327 FROM EADMS142
3667          DR   D2327

3668          KK   R4375
3669          KM        ROUTE DIVERTED HYDROGRAPH D2327 TO C4377
3670          RK    2600  0.0044   0.040            TRAP      10       3

3671          KK   S4376
3672          KM        RUNOFF FROM SUBBASIN S4376
3673          BA   0.532
3674          LS             82
3675          UK     150  0.0075   0.200     100
3676          RK    2600  0.0050   0.020   0.014    TRAP       3      10
3677          RK    2600  0.0070   0.040            TRAP       5       3

3678          KK   C4377
3679          KM        COMBINE HYDROGRAPHS S4376, R4375, C4373, AND R4367
3680          HC       4

3681          KK   R4379
3682          KM        ROUTE HYDROGRAPH C4377 TO C4385
3683          RK    2600  0.0044   0.040            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3684          KK   D4365
3685          KM        RETRIEVE DIVERTED HYDROGRAPH D4365
3686          DR   D4365

3687          KK   R4381
3688          KM        ROUTE HYDROGRAPH D4365 TO C4385
3689          RK    3800  0.0080   0.040            TRAP       5       3

3690          KK   D4359
3691          KM        RETRIEVE DIVERTED HYDROGRAPH D4359
3692          DR   D4359

3693          KK   S4384
3694          KM        RUNOFF FROM SUBBASIN S4384
3695          BA   0.201
3696          LS             79
3697          UK     100  0.0057   0.200     100
3698          RK    2000  0.0075   0.020   0.007    TRAP       3      10
3699          RK    2300  0.0088   0.040            TRAP      10       3

3700          KK   C4385
3701          KM        COMBINE FLOWS FROM S4384, D4359, R4381, AND R4379
3702          HC       4

3703          KK  DV4387
3704          KM        50% SPLIT FLOW S. VIA CULVERTS/FLOW W. VIA GROUTED CHANNEL
3705          KM        (SUPERSTITION SPRINGS-CVL) TO R4401
3706          DT   D4387
3707          DI       0    5000
3708          DQ       0    2500

3709          KK   R4389
3710          KM        ROUTE FLOW S. FROM SOUTHERN TO C4391 (R0326-CVL)
3711          RK     100  0.0030   0.020            TRAP      12     1.5

3712          KK   C4391
3713          KM        COMBINE FLOWS FROM R4389, R4361, R4343, AND R4333
3714          HC       4

3715          KK   R4393
3716          KM        ROUTE FLOW S. FROM SOUTHERN TO FREEWAY C4395 (R0326-CVL)
3717          RK    2600  0.0030   0.020            TRAP      12     1.5

3718          KK   S4394
3719          KM        RUNOFF FROM SUBBASIN S4394
3720          BA   0.326
3721          LS             85
3722          UK     100  0.0025   0.200     100
3723          RK    3100  0.0065   0.020    0.01    TRAP       3      10
3724          RK    2600   0.003   0.035            TRAP      12     1.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3725          KK   C4395
3726          KM        COMBINE FLOWS FROM S4394, R4393, AND R4327
3727          HC       3

3728          KK   R4397
3729          KM        ROUTE C4395 WEST TO SOSSAMAN CHANNEL C4407 (R0340-CVL1919)
3730          RK    4000  0.0066   0.040            TRAP      25       4

3731          KK   S4400
3732          KM        RUNOFF FROM SUBBASIN S4400 (SUB 350-CVL/922)
3733          BA   0.360
3734          LS             85
3735          UK     150   0.005    0.20     100
3736          RK    3100  0.0061    0.06   0.035    TRAP      40    0.01
3737          RK    4350  0.0062   0.016            TRAP      10     1.5

3738          KK   D4387
3739          KM        RETRIEVE D4387:THE FLOW W. FROM SOUTHERN AND HAWES (D326-CVL/933)
3740          DR   D4387

3741          KK   R4401
3742          KM        ROUTE D4387 TO SOSSAMAN CHANNEL (C4403) IN CHANNEL ADJACENT TO SOUTHERN
3743          KM        (R0335-CVL/936)
3744          RK    4000   0.007   0.020            TRAP      10     1.5

3745          KK   C4403
3746          KM        COMBINE R4401 AND S4400
3747          HC       2

3748          KK   R4405
3749          KM        ROUTE C4403 S. IN SOSSAMAN CHANNEL FROM SOUTHERN TO
3750          KM        FRWY C4407 (R0351-CVL/942)
3751          RK    2500   0.006   0.035            TRAP      20     2.5

3752          KK   S4406
3753          KM        RUNOFF FROM SUBBASIN S4406 (SUB355-CVL/945)
3754          BA    0.31
3755          LS             87
3756          UK     110   0.005    0.20     100
3757          RK    2600  0.0038   0.016    0.05    TRAP      40    0.01
3758          RK    4200  0.0026   0.016            TRAP    16.6     1.5

3759          KK   C4407
3760          KM        COMBINE S4406, R4405, AND R4397
3761          HC       3

3762          KK  DV4409
3763          KM        DIVERT 100% OF RUNOFFS ALONG SOSSAMAN CHANNEL TO R4707
3764          DT   D4409
3765          DI       0    5000
3766          DQ       0    5000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3767          KK   S4410
3768          KM        RUNOFF FROM SUBBASIN S4410
3769          BA   0.148
3770          LS             83
3771          UK    120   0.008     .20     100
3772          RK   5000   0.005    0.02            TRAP     25       0

3773          KK   B4411
3774          KM        ROUTE RUNOFF TO TWO RETENTION BASIN
3775          RS       1    STOR       0
3776          SV       0     6.8     6.9
3777          SQ       0    0.01     100
3778          SE       0     2.5     2.6

3779          KK   R4413
3780          KM        ROUTE RETENTION BASIN OVERFLOW DOWNSTREETS TO NEXT BASIN
3781          RK   2200   0.005    0.02            TRAP     35       0

3782          KK   S4414
3783          KM        RUNOFF FROM SUBBASIN S4414 FOUNTAIN OF THE SUN(SUB246-CVL)
3784          BA   0.119
3785          LS             83
3786          UK    100  0.0075     0.2     100
3787          RK   2800   0.006    0.02            TRAP     30       0

3788          KK   B4415
3789          KM        ROUTE RUNOFF TO GOLF COURSE LAKES (RET 246-CVL)
3790          RS       1    STOR       0
3791          SV       0     5.5     5.6
3792          SQ       0    0.01     100
3793          SE       0     1.5     1.6

3794          KK   R4417
3795          KM        ROUTE LAKE OVERFLOW FROM S4414 THROUGH GOLF COURSE
3796          RK   2400   0.006  0.0035            TRAP      0      15

3797          KK   S4420
3798          KM        RUNOFF FROM SUBBASIN S4420 FOUNTAIN OF THE SUN (SUB250-CVL)
3799          BA   0.269
3800          LS             80
3801          UK    200   0.005     0.2     100
3802          RK   2800   0.005    0.02   0.067    TRAP     35       1
3803          RK    200   0.005   0.035            TRAP      0      15

3804          KK   C4421
3805          KM        COMBINE HYDROGRAPHS FROM S4420, R4417, AND R4413
3806          HC       3

3807          KK   B4423
3808          KM        ROUTE RUNOFF THROUGH RETENTION BASINS (RET252-CVL)
3809          RS       1    STOR       0
3810          SV       0    16.9      17
3811          SQ       0    0.01     100
3812          SE       0     6.0     6.1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3813          KK   D2385
3814          KM        RETRIEVE DIVERTED HYDROGRAPH D2385
3815          DR   D2385

3816          KK   R4425
3817          KM        ROUTE PARTIAL FLOWS DOWN SOSSAMAN ROAD/RO244-CVL/302)
3818          RK    3200   0.006    0.03            TRAP      10       2

3819          KK   C4427
3820          KM        COMBINE FLOWS ALONG SOSSAMAN FROM R4425 AND B4423
3821          HC       2

3822          KK   R4429
3823          KM        ROUTE FLOWS DOWN SOSSAMAN ROAD TO CHANNEL TURN (RO254-CVL/366)
3824          RK    1300   0.006    0.03            TRAP      10       2

3825          KK   S4430
3826          KM        RUNOFF FROM SUBBASIN S4430
3827          BA   0.042
3828          LS             86
3829          UK     100   0.005     0.2     100
3830          RK     800   0.008    0.02            TRAP      20       0

3831          KK   C4431
3832          KM        COMBINE HYDROGRAPHS FROM S4430 AND R4429 (CO258-CVL/379)
3833          HC       2

3834          KK  DV4433
3835          KM        DIVERT PARTIAL FLOWS WESTWARD DOWN CHANNEL (DIV258-CVL/383) TO R4453
3836          DT   D4433
3837          DI       0     260    3000
3838          DQ       0     260    2999

3839          KK   R4435
3840          KM        ROUTE FLOW DOWN SOSSAMAN ROAD TO SOUTHERN AVE. (C4441)
3841          RK    1600   0.004   0.030            TRAP      50       0

3842          KK   S4440
3843          KM        RUNOFF FROM SUBBASIN S4440 (SUB262-CVL/321)
3844          BA   0.054
3845          LS             86
3846          UK     120   0.004     0.2     100
3847          RK     900  0.0056    0.02   0.005    TRAP      25       0
3848          RK    1600   0.006    0.02            TRAP      25       0

3849          KK   C4441
3850          KM        COMBINE FLOWS FROM S4440 AND R4435
3851          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


3852          KK   R4443
3853          KM        ROUTE HYDROGRAPH C4441 TO C4447
3854          RK    2400   0.004   0.030            TRAP      50       0

3855          KK   S4446
3856          KM        RUNOFF FROM SUBBASIN S4446-DESERT SAND (SUB262-CVL/391)
3857          BA   0.095
3858          LS              86
3859          UK     120   0.004     0.2     100
3860          RK     900  0.0056    0.02   0.005    TRAP      25       0
3861          RK    2400   0.006    0.02            TRAP      24       0

3862          KK   C4447
3863          KM        COMBINE FLOWS FROM S4446 AND R4443
3864          HC       3

3865          KK  DV4449
3866          KM        DIVERT FLOWS (Q>890) TO OFF CHANNEL STORAGE AT       (DIV24-AN-WEST)
3867          DT   D4449
3868          DI       0     890    1090
3869          DQ       0       0     200

3870          KK   R4451
3871          KM        ROUTE HYDROGRAPH DV4449 ALONG FREEWAY CHANNEL TO C4461/R0262-CVL
3872          RK     350   0.006   0.045            TRAP      30      15

3873          KK   D4433
3874          KM        RETRIEVE FLOW FROM CHANNEL DIVERSION D4433
3875          DR   D4433

3876          KK   R4453
3877          KM        ROUTE FLOWS DOWN CHANNEL TO SOUTHERN C4455
3878          RK    2200  0.0047    0.04            TRAP      14     2.5

3879          KK   S4454
3880          KM        RUNOFF FROM SUBBASIN S4454 SUPERSTITION SPRING DEVEL. (SUB264-CVL/405)
3881          BA   0.060
3882          LS              77
3883          UK     200  0.0087     0.2     100
3884          RK    1000  0.0087    0.05   0.004    TRAP       0      50
3885          RK    1200  0.0040   0.035            TRAP      25       4

3886          KK   C4455
3887          KM        COMBINE FLOWS FROM S4454 AND R4453
3888          HC       2

3889          KK   R4457
3890          KM        ROUTE HYDROGRAPH TO C4461
3891          RK    2000   0.004   0.035            TRAP      25       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3892          KK   S4460
3893          KM        RUNOFF FROM SUBBASIN S4460 (SUB264-CVL)
3894          BA   0.108
3895          LS             77
3896          UK    200   .0087     0.2     100
3897          RK   1000  0.0087    0.05   0.004    TRAP       0       50
3898          RK   2000   0.004   0.035            TRAP      25        4

3899          KK   C4461
3900          KM        COMBINE FLOWS FROM S4460, R4457, AND R4451
3901          HC       3

3902          KK   R4463
3903          KM        ROUTE HYDROGRAPH C4461 TO C4495 ALONG FREEWAY CHANNEL
3904          RK   1200    0.01    0.03            TRAP      20        2

3905          KK   D2403
3906          KM        RETRIEVE FLOW FROM D2403 AT BROADWAY
3907          DR   D2403

3908          KK   S4466
3909          KM        RUNOFF FROM SUBBASIN S4466 APARTMENT SITE (SUB286-CVL)
3910          BA   0.021
3911          LS             91
3912          UK    100   0.007     0.2     100
3913          RK   1000   0.007   0.025            TRAP      40        0

3914          KK   B4467
3915          KM        RETAIN 50-YEAR RUNOFF FROM S4466 (RET282-CVL)
3916          RS       1    STOR       0
3917          SV       0     2.3     2.4
3918          SQ       0    0.01     100
3919          SE       0       2     2.1

3920          KK   S4470
3921          KM        RUNOFF FROM SUBBASIN S4470 (SUB284-CVL)
3922          BA   0.070
3923          LS             82
3924          UK    100   0.007     0.2     100
3925          RK   3500  0.0065   0.020            TRAP      30        0

3926          KK   C4471
3927          KM        COMBINE FLOWS FROM S4470, B4467,AND D2403 (CO286-CVL)
3928          HC       3

3929          KK   R4473
3930          KM        ROUTE FLOW DOWN 72ND STREET (RO286-CVL) TO C4477
3931          RK   1700   0.005    0.02            TRAP      50        0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3932          KK   S4474
3933          KM        RUNOFF FROM SUBBASIN S4474 (SUB288-CVL)
3934          BA   0.142
3935          LS             87
3936          UK    120   0.007     0.2     100
3937          RK   4000   0.005    0.02            TRAP      35       0

3938          KK   B4475
3939          KM        RETAIN 50-YEAR RUNOFF FROM S4474 (RET288-CVL)
3940          RS      1    STOR       0
3941          SV      0      27    27.1
3942          SQ      0    0.01     100
3943          SE      0       4     4.1

3944          KK   C4477
3945          KM        COMBINE HYDROGRAPHS FROM B4475 AND R4473 (C0290-CVL))
3946          HC      2

3947          KK   R4479
3948          KM        ROUTE HYDROGRAPH DOWN 72ND STREET TO C4487
3949          RK   3000   0.005    0.02

3950          KK   S4480
3951          KM        RUNOFF FROM SUBBASIN S4480 (SUB292-CVL)
3952          BA   0.114
3953          LS             84
3954          UK    120   0.007     0.2     100
3955          RK   2700   0.007   0.035            TRAP       0      15

3956          KK   R4481
3957          KM        ROUTE HYDROGRAPH S4480 TO C4487
3958          RK   1300   0.007   0.025            TRAP      50       0     YES

3959          KK   S4484
3960          KM        RUNOFF FROM SUBBASIN S4484
3961          BA   0.060
3962          LS             77
3963          UK    200  0.0087     0.2     100
3964          RK    800   0.006    0.04            TRAP      40       0

3965          KK   S4486
3966          KM        RUNOFF FROM SUBBASIN S4486(SUB294-CVL)
3967          BA   0.057
3968          LS             74
3969          UK    400   0.005     0.2     100
3970          RK   5400   0.005   0.020            TRAP      50       0

3971          KK   C4487
3972          KM        COMBINE HYDROGRAPHS FROM S4486, S4484, R4481, AND R4479 AT SOUTHERN AVE
3973          HC      4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

3974          KK   R4489
3975          KM        ROUTE HYDROGRAPH C4487 TO C4491 AT FREEWAY & 72ND STREET
3976          RK    2000   0.004    0.03            TRAP      40       0

3977          KK   S4490
3978          KM        RUNOFF FROM SUBBASIN S4490 (SUB298-CVL)
3979          BA   0.108
3980          LS             77
3981          UK     200  0.0087    0.20     100
3982          RK    1200  0.0087   0.045   0.009    TRAP      20      50
3983          RK    2000   0.004    0.03            TRAP      40       0

3984          KK   C4491
3985          KM        COMBINE FLOWS FROM S4490 AND R4489
3986          HC       2

3987          KK  DV4493
3988          KM        DIVERT FLOWS (Q>1265) TO OFF CHANNEL STORAGE AT      , (DIV26A-AN-WEST)
3989          DT   D4493
3990          DI       0    1265    1500
3991          DQ       0       0     235

3992          KK   C4495
3993          KM        COMBINE HYDROGRAPHS FROM D4493 AND R4463
3994          HC       2

3995          KK   R4497
3996          KM        ROUTE HYDROGRAPH TO C4527 ALONG FREEWAY CHANNEL AT POWER RD (R0300-CVL)
3997          RK    2600    0.01    0.03            TRAP      40       2

3998          KK   S4500
3999          KM        RUNOFF FROM SUBBASIN S4500 (SUB 302-CVL)
4000          BA   0.044
4001          LS             82
4002          UK     400   0.005     0.2     100
4003          RK    1400    0.01    0.02            TRAP      30       0

4004          KK   R4501
4005          KM        ROUTE HYDROGRAPH S4500 ALONG SOUTHERN TO POWER RD C4505 (R0302-CVL)
4006          RK    1400   0.045    0.02            TRAP      60       0     YES

4007          KK   S4504
4008          KM        RUNOFF FROM SUBBASIN S4504 (SUB306-CVL)
4009          BA   0.385
4010          LS             78
4011          UK     400   0.009     0.2     100
4012          RK    3600   0.007   0.035    0.19    TRAP       0      15
4013          RK    2400   0.004   0.020            TRAP      60       0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4014          KK   C4505
4015          KM        COMBINE HYDROGRAPHS S4504 AND R4501 AT POWER RD & SOUTHERN AVE C4505
4016          HC       2

4017          KK  DV4507
4018          KM        DIVERT 50% OF FLOW S. DWN POWER RD FROM SOUTHERN TO R4521(DIV302-CVL)
4019          DT   D4507
4020          DI       0      42      64     207
4021          DQ       0      21      32      98

4022          KK   H4510
4023          KM        OUTLFOW FROM LEISURE WORLD: WALL OPENING ON SOUTHERN AVE (H420-CVL)
4024          BA    0.56
4025          IN      30
4026          QI       0       0       0       0       0       0       0       0       0
4027          QI       0       0       0       0       0       0     145     145     145
4028          QI     145     145     145     145     145     145     145     145     145
4029          QI     145     145     145     145     145     145     145     145     145
4030          QI     145     145     145       0       0       0       0

4031          KK   C4511
4032          KM        COMBINE H4510 AND DV4507
4033          HC       2

4034          KK   R4513
4035          KM        ROUTE LEISURE WORLD OUTFLOW C4511 TO M.C. FLOODWAY EMF6  (R0422-CVL)
4036          RK    3700  0.0027   0.020            TRAP      68

4037          KK   D3349
4038          KM        D3349 RETURNED TO THE SYSTEM AT BROADWAY RD.(R4515)
4039          DR   D3349

4040          KK   R4515
4041          KM        ROUTE TO SOUTHERN AVE. ALONG THROUGH EMCFW
4042          RK    5900  0.0005   0.025            TRAP     120       3     YES

4043          KK    EMF6
4044          KM        COMBINE R4515 AND R4513 AT E.M.C. FLOODWAY AND SOUTHERN AVE
4045          HC       2

4046          KK  DV4519
4047          KM        DIVERT FLOW TO R4531
4048          DT   D4519
4049          DI       0  100000
4050          DQ       0  100000

4051          KK   D4507
4052          KM        RETRIEVE FLOWS FROM D4507 AT POWER RD AND SOUTHERN
4053          DR   D4507
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4054          KK   R4521
4055          KM        ROUTE HYDROGRAPH D4507 DOWN POWER RD TO
4056          KM        SUPERSTITION CHANNEL C4527 (R0306-CVL)
4057          RK    2300   0.004    0.02            TRAP      60       0

4058          KK   S4524
4059          KM        RUNOFF FROM SUBBASIN S4524
4060          BA    0.11
4061          LS              81
4062          UK     200   0.009     0.2     100
4063          RK    1000   0.009   0.045            TRAP      15      10
4064          RK    2000   0.003   0.025            TRAP      40       0

4065          KK   B4525
4066          KM        ONSITE RETENTION BASIN STORAGE - POST DEVELOPMENT CONDITION (RET304-CVL)
4067          RS       1    STOR       0
4068          SV       0     6.8       7
4069          SQ       0      10     500

4070          KK   S4526
4071          KM        RUNOFF FROM SUBBASIN S4526
4072          BA    0.09
4073          LS              77
4074          UK     200   0.008     0.2     100
4075          RK     700   0.008   0.045    0.02    TRAP      15      10
4076          RK    1500   0.004   0.025            TRAP      60       0

4077          KK   C4527
4078          KM        COMBINE HYDROGRAPHS FROM S4526, B4525, R4521, DV4519, AND R4497
4079          HC       5

4080          KK   R4529
4081          KM        ROUTE HYDROGRAPH C4527 TO C4532 (AN-WEST ECADMS, POST)
4082          RK    4800  0.0064   0.025            TRAP      12       2

4083          KK   S4530
4084          KM        RUNOFF FROM SUBBASIN S4530 (SUB410-CVL)
4085          BA     1.0
4086          LS              77
4087          UK     700   0.005    0.20     100
4088          RK    2600  0.0038   0.035            TRAP      10       3
4089          RK    5200  0.0015   0.015            TRAP      12       2

4090          KK   D4519
4091          KM        FLOW FROM D4519 RETURNED TO THE SYSTEM
4092          DR   D4519

4093          KK   R4531
4094          KM        ROUTE FLOW S. IN EMCFW (RO7/ADMS: JAN 87, RO427-CVL)
4095          RK    2400   0.005   0.025            TRAP     120       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4096          KK    EMF7
4097          KM        COMBINE R4531, S4530, R4529, AND DV3349 AT EMCFW AND FREEWAY
4098          HC       4

4099          KK   R4533
4100          KM        ROUTE EMF7  IN FLOODWAY TO BASELINE C4535 (R027/ADMS: JAN 87, R0432-CVL)
4101          RK    3500   0.007   0.025            TRAP     140       3

4102          KK   S4534
4103          KM        RUNOFF FROM SUBBASIN S4534
4104          BA   0.329
4105          LS              77
4106          UK     600   0.003     0.2     100
4107          RK    5600   0.002   0.030            TRAP      20       0

4108          KK   C4535
4109          KM        COMBINE FLOWS FROM S4534 AND R4533
4110          HC       2

4111          KK   D4041
4112          KM        RETRIEVE RUNOFF FROM D4041 AT FREEWAY AND IRONWOOD
4113          DR   D4041

4114          KK   R4536
4115          KM        ROUTE D4041 TO DV4537 ALONG IRONWOOD RD
4116          RK    1200   0.004   0.045            TRAP       3       6

4117          KK  DV4537
4118          KM        DIVERT 50% OF THE FLOW TO R4573
4119          DT   D4537
4120          DI       0     100   10000
4121          DQ       0      50    5000

4122          KK   R4538
4123          KM        ROUTE DV4537 SOUTH ALONG IRONWOOD TO C4540
4124          RK     500   0.004   0.045            TRAP       3       6

4125          KK   S4539
4126          KM        RUNOFF FROM SUBBASIN S4539
4127          BA   0.088
4128          LS              77
4129          UK     800   0.007     0.2     100
4130          RK    2200   0.007   0.045            TRAP       2       4

4131          KK   C4540
4132          KM        COMBINE S4539 AND R4538
4133          HC       2

4134          KK  DV4541
4135          KM        DIVERT 50% OF FLOW INTO R4577
4136          DT   D4541
4137          DI       0     100
4138          DQ       0      50
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4139          KK   S4544
4140          KM        RUNOFF FROM SUBBASIN S4544
4141          BA   0.054
4142          LS              77
4143          UK    500   0.007     0.2     100
4144          RK   2800   0.007   0.045           TRAP       2       4

4145          KK  DV4545
4146          KM        DIVERT 50% OF FLOW INTO R4579
4147          DT   D4545
4148          DI       0     100
4149          DQ       0      50

4150          KK   S4548
4151          KM        RUNOFF FROM SUBBASIN S4548
4152          BA   0.057
4153          LS              77
4154          UK    500   0.007     0.2     100
4155          RK   2500   0.007   0.045           TRAP       2       4

4156          KK   C4549
4157          KM        COMBINE FLOWS FROM S4548, DV4545, AND DV4541
4158          HC       3

4159          KK   R4551
4160          KM        ROUTE HYDROGRAPH THROUGH SUBBASIN S4554 TO C4555
4161          RK   2000   0.006   0.045           TRAP       2       4

4162          KK   S4554
4163          KM        RUNOFF FROM SUBBASIN S4554
4164          BA   0.336
4165          LS              77
4166          UK    500   0.006    0.20     100
4167          RK   2200   0.006   0.045           TRAP       2       4

4168          KK   C4555
4169          KM        COMBINE FLOWS FROM S4554, AND R4551 AT CAP OVERCHUTE #16
4170          HC       2

4171          KK  DV4557
4172          KM        DIVERT FLOW THROUGH STR#16 AT R4593
4173          DT   D4557
4174          DI       0   10000
4175          DQ       0   10000

4176          KK   D4113
4177          KM        RETRIEVE DIVERTED HYDROGRAPH D4113 INTO SYSTEM
4178          DR   D4113
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4179          KK   R4559
4180          KM        ROUTE HYDROGRAPH TO CAP OVERCHUTE #15 (C4569)
4181          RK    3600   0.006   0.035            TRAP       8      1.5

4182          KK   D4037
4183          KM        RETRIEVE DIVERTED HYDROGRAPH D4037 INTO S4566
4184          DR   D4037

4185          KK   R4561
4186          KM        ROUTE HYDROGRAPH D4037 TO CAP OVERCHUTE #15 (C4569)
4187          RK    3400   0.006   0.035            TRAP       8      1.5

4188          KK   S4566
4189          KM        RUNOFF FROM SUBBASIN S4566
4190          BA   0.146
4191          LS             80
4192          UK    1200   0.007   0.200     100
4193          RK    1000   0.006   0.050            TRAP       2       4
4194          RK    1900   0.004   0.035            TRAP      10       3

4195          KK   S4568
4196          KM        RUNOFF FROM SUBBASIN S4568
4197          BA   0.104
4198          LS             86
4199          UK     100   0.007   0.200     100
4200          RK    2200   0.006   0.020   0.052    TRAP       3      20
4201          RK    1900   0.004   0.035            TRAP      10       3

4202          KK   C4569
4203          KM        COMBINE HYDROGRAPHS S4568, S4566, R4561, AND R4559 TO EMPTY THE STACK
4204          HC       4

4205          KK   S4570
4206          KM        RUNOFF FROM SUBBASIN S4570
4207          BA   0.085
4208          LS             81
4209          UK     500   0.007   0.200     100
4210          RK    1400   0.006   0.020    0.03    TRAP       3      20
4211          RK    2300   0.006    0.04            TRAP       3       4

4212          KK   D4537
4213          KM        RETRIEVE DIVERTED HYDROGRAPH D4537
4214          DR   D4537

4215          KK   R4573
4216          KM        ROUTE HYDROGRAPH THROUGH S4570 TO CAP OVERCHUTE #15 (C4575)
4217          RK    2300   0.006    0.04            TRAP       2       4

4218          KK   C4575
4219          KM        COMBINE FLOWS FROM S4570 AND R4573
4220          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4221          KK   D4541
4222          KM        RETRIEVE DIVERTED HYDROGRAPH D4541
4223          DR   D4541

4224          KK   R4577
4225          KM        ROUTE HYDROGRAPH THROUGH S4580 TO C4581
4226          RK    3100   0.006    0.04            TRAP       2       4

4227          KK   D4545
4228          KM        RETRIEVE DIVERTED HYDROGRAPH D4545
4229          DR   D4545

4230          KK   R4579
4231          KM        ROUTE HYDROGRAPH THROUGH S4580 TO C4581
4232          RK    3100   0.006    0.04            TRAP       2       4

4233          KK   S4580
4234          KM        RUNOFF FROM SUBBASIN S4580
4235          BA   0.118
4236          LS             77
4237          UK     600   0.007   0.200     100
4238          RK    3100   0.006    0.04            TRAP       2       4

4239          KK   C4581
4240          KM        COMBINE HYDROGRAPHS S4580, R4579, AND R4577
4241          HC       3

4242          KK   C4583
4243          KM        COMBINE HYDROGRAPHS C4581, C4575, C4569, AND DV4557 AT CAP OVERCHUTE #15
4244          HC       4

4245          KK  DV4585
4246          KM        DIVERT 100% OF FLOW ACROSS CAP OVERCHUTE #15 TO R4607
4247          DT   D4585
4248          DI       0   10000
4249          DQ       0   10000

4250          KK   S4588
4251          KM        RUNOFF FROM SUBBASIN S4588
4252          BA   0.072
4253          LS             77
4254          UK     200   0.007   0.200     100
4255          RK    1600  0.0104    0.04            TRAP       2       4

4256          KK  DV4589
4257          KM        DIVERT 100% OF FLOWS ACROSS GUADALUPE RD TO R5001
4258          DT   D4589
4259          DI       0   10000
4260          DQ       0   10000
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4261          KK   S4590
4262          KM        RUNOFF FROM SUBBASIN S4590
4263          BA   0.111
4264          LS              77
4265          UK     600   0.007   0.200     100
4266          RK    2400  0.0104    0.04            TRAP       2       4

4267          KK  DV4591
4268          KM        DIVERT 100% OF FLOWS ACROSS GUADALUPE RD TO R5025
4269          DT   D4591
4270          DI       0   10000
4271          DQ       0   10000

4272          KK   D4557
4273          KM        RETRIEVE DIVERTED HYDROGRAPH D4557
4274          DR   D4557

4275          KK   R4593
4276          KM        ROUTE D4557 THROUGH S4595 TO C4599
4277          RK    5800  0.0104    0.04            TRAP       2       4

4278          KK   S4596
4279          KM        RUNOFF FROM SUBBASIN S4596
4280          BA   0.377
4281          LS              77
4282          UK     800   0.007    0.20     100
4283          RK    5800  0.0104    0.04            TRAP       2       4

4284          KK  DV4597
4285          KM        DIVERT 25% OF RUNOFF TO S4610
4286          DT   D4597
4287          DI       0     100    1000
4288          DQ       0      25     250

4289          KK   C4599
4290          KM        COMBINE HYDROGRAPHS DV4597, R4593, DV4591, DV4589, AND DV4585
4291          HC       5

4292          KK  DV4601
4293          KM        DIVERT HYDROGRAPH ACROSS GUADALUPE RD TO R5043
4294          DT   D4601
4295          DI       0   10000
4296          DQ       0   10000

4297          KK   S4604
4298          KM        RUNOFF FROM SUBBASIN S4604
4299          BA    0.04
4300          LS              77
4301          UK     500   0.007    0.20     100
4302          RK    1200  0.0104    0.04            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4303          KK   R4605
4304          KM        ROUTE HYDROGRAPH TO C4611
4305          RK    8000    0.09    0.05            TRAP       2       4     YES

4306          KK   D4585
4307          KM        RETRIEVE DIVERTED HYDROGRAPH D4585
4308          DR   D4585

4309          KK   R4607
4310          KM        ROUTE HYDROGRAPH TO C4611
4311          RK    9800   0.009    0.05            TRAP       2       4

4312          KK   S4610
4313          KM        RUNOFF FROM SUBBASIN S4610
4314          BA   0.947
4315          LS             77
4316          UK     800   0.007    0.02     100
4317          RK   10500   0.009    0.05            TRAP       2       4

4318          KK   D4597
4319          KM        RETRIEVE DIVERTED HYDROGRAGH D4597
4320          DR   D4597

4321          KK   C4611
4322          KM        COMBINE HYDROGRAPHS D4597, S4610, R4607, R4605, AND DV4601 AT GUADALUPE
4323          HC       5

4324          KK  DV4613
4325          KM        DIVERT HYDROGRAPH ACROSS GUADALUPE RD TO R5055
4326          DT   D4613
4327          DI       0   10000
4328          DQ       0   10000

4329          KK    4614
4330          KM        RUNOFF FROM SUBBASIN S4614
4331          BA     .15
4332          LS             77
4333          UK     600   0.007    0.02     100
4334          RK    2700  0.0074   0.040            TRAP       2       4

4335          KK  DV4615
4336          KM        DIVERT 40% OF RUNOFF ACROSS BASELINE RD
4337          DT   D4615
4338          DI       0     100   10000
4339          DQ       0      40    4000

4340          KK   R4616
4341          KM       ROUTE HYDROGRAPH
4342          RK    1200  0.0057    0.04            TRAP      10       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4343          KK   S4618
4344          KM       RUNOFF FROM SUBBASIN S4620
4345          BA   0.112
4346          LS             77
4347          UK     500   0.007    0.20     100
4348          RK    3200  0.0074    0.04            TRAP       2       4

4349          KK   C4619
4350          KM        COMBINE HYDROGRAPHS
4351          HC       2

4352          KK  DV4620
4353          KM        DIVERT 40% OF RUNOFF ACROSS BASELINE RD
4354          DT   D4620
4355          DI              0     100   10000
4356          DQ       0      40    4000

4357          KK   R4621
4358          KM        ROUTE HYDROGRAPH
4359          RK    1000  0.0057    0.04            TRAP      10       2

4360          KK   S4622
4361          KM        RUNOFF FROM SUBBASIN S4622
4362          BA    0.09
4363          LS             77
4364          UK     400  0.0070    0.20     100
4365          RK    4000  0.0074    0.04            TRAP       2       4

4366          KK   C4623
4367          KM         COMBINE HYDROGRAPHS
4368          HC       2

4369          KK  DV4624
4370          KM         DIVERT 40% OF RUNOFF ACROSS BASELINE RD
4371          DT   D4624
4372          DI       0     100   10000
4373          DQ       0      40    4000

4374          KK   R4625
4375          KM         ROUTE HYDROGRAPH
4376          RK     800  0.0057    0.04            TRAP      10       2

4377          KK   S4626
4378          KM         RUNOFF FROM SUBBASIN S4626
4379          BA    0.15
4380          LS             77
4381          UK     600   0.007    0.20     100
4382          RK    3800   0.007    0.04            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4383          KK   C4627
4384          KM        COMBINE HYDROGRAPHS
4385          HC       2

4386          KK  DV4628
4387          KM        DIVERT 40% OF RUNOFF ACROSS BASELINE RD
4388          DT   D4628
4389          DI       0      100   10000
4390          DQ       0       40    4000

4391          KK   R4629
4392          KM         ROUTE HYDROGRAPH
4393          RK     500  0.0057    0.04            TRAP      10       2

4394          KK   S4630
4395          KM         RUNOFF FROM SUBBASIN S4630
4396          BA    0.15
4397          LS              77
4398          UK     600  0.0070    0.20     100
4399          RK    4400  0.0070    0.04            TRAP       2       4

4400          KK   D4107
4401          KM         RETRIEVE DIVERTED HYDROGRAPH
4402          DR   D4107

4403          KK   R4631
4404          KM         ROUTE HYDROGRAPH
4405          RK    3000  0.0070    0.04            TRAP       2       4

4406          KK   C4632
4407          KM         COMBINE HYDROGRAPHS
4408          HC       3

4409          KK  DV4634
4410          KM         DIVERT 70% OF FLOW TO THE WEST
4411          DT   D4634
4412          DI       0      100   10000
4413          DQ       0       70    7000

4414          KK   R4635
4415          KM         ROUTE HYDROGRAPH
4416          RK    6000  0.0090    0.04            TRAP       2       4

4417          KK   D4615
4418          KM         RETRIEVE DIVERTED HYDROGRAPH
4419          DR   D4615

4420          KK   R4636
4421          KM         ROUTE HYDROGRAPH
4422          RK    8200  0.0090    0.04            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4423          KK   D4620
4424          KM         RETRIEVE DIVERTED HYDROGRAPH
4425          DR   D4620

4426          KK   R4638
4427          KM         ROUTE HYDROGRAPH
4428          RK    8000  0.0090    0.04            TRAP       2       4

4429          KK   D4624
4430          KM         RETRIEVE DIVERTED HYDROGRAPH
4431          DR   D4624

4432          KK   R4640
4433          KM         ROUTE HYDROGRAPH
4434          RK    7000  0.0090    0.04            TRAP       2       4

4435          KK   D4628
4436          KM         RETRIEVE DIVERTED HYDROGRAPH
4437          DR   D4628

4438          KK   R4642
4439          KM         ROUTE HYDROGRAPH
4440          RK    7000  0.0090    0.04            TRAP       2       4

4441          KK   C4643
4442          KM         COMBINE HYDROGRAPHS
4443          HC       4    .001

4444          KK   S4644
4445          KM         RUNOFF FROM SUBBASIN S4644
4446          BA    0.55
4447          LS              77
4448          UK     800  0.0090    0.20     100
4449          RK    8200  0.0090    0.04            TRAP       2       4

4450          KK   C4645
4451          KM         COMBINE HYDROGRAPHS
4452          HC       4

4453          KK  DV4647
4454          KM         DIVERT 100% OF RUNOFF S. ACROSS GUADALUPE RD TO R5105
4455          DT   D4647
4456          DI       0   10000
4457          DQ       0   10000

4458          KK   S4650
4459          KM         RUNOFF FROM SUBBASIN S4650
4460          BA    0.16
4461          LS              77
4462          UK     500  0.0050    0.20     100
4463          RK    6000  0.0090    0.04            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4464          KK  DV4651
4465          KM         DIVERT 100% OF RUNOFF FROM S4650 s. ACROSS GUADALUPE RD R5107
4466          DT   D4651
4467          DI       0   10000
4468          DQ       0   10000

4469          KK   D4634
4470          KM         RETRIEVE DIVERTED HYDROGRAPH
4471          DR   D4634

4472          KK   R4652
4473          KM         ROUTE HYDROGRAPH
4474          RK    2500  0.0060    0.04            TRAP      20       2

4475          KK   S4654
4476          KM         RUNOFF FROM SUBBASIN S4654
4477          BA    0.23
4478          LS              77
4479          UK    1200  0.0070    0.20     100
4480          RK    3400  0.0060    0.40            TRAP       2       4

4481          KK   C4655
4482          KM         COMBINE HYDROGRAPHS
4483          HC       3

4484          KK  DV4656
4485          KM         DIVERT 40% OF RUNOFF S. ACROSS BASELINE RD.
4486          DT   D4656
4487          DI       0     100   10000
4488          DQ       0      40    4000

4489          KK   R4657
4490          KM        ROUTE HYDROGRAPH
4491          RK    3500  0.0060    0.40            TRAP      20       2

4492          KK   D4199
4493          KM        RETRIEVE DIVERTED HYDROGRAPH
4494          DR   D4199

4495          KK   R4658
4496          KM        ROUTE HYDROGRAPH
4497          RK    5200  0.0060    0.05            TRAP       2       4

4498          KK   S4660
4499          KM        RUNOFF FROM SUBBASIN S4660
4500          BA    0.34
4501          LS              77
4502          UK     500  0.0070    0.20     100
4503          RK    5500  0.0060    0.05            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4504          KK   C4661
4505          KM         COMBINE HYDROGRAPHS
4506          HC       3

4507          KK   R4663
4508          KM         ROUTE HYDROGRAPH TO C4667
4509          RK    5280  0.0076    0.05            TRAP      10       3

4510          KK   D4656
4511          KM         RETRIEVE DIVERTED HYDROGRAPH
4512          DR   D4656

4513          KK   R4664
4514          KM        ROUTE HYDROGRAPH
4515          RK    6600  0.0090    0.04            TRAP       2       4

4516          KK   S4666
4517          KM        RUNOFF FROM SUBBASIN S4666
4518          BA    0.55
4519          LS              77
4520          UK     800  0.0050    0.20     100
4521          RK    6200   0.009    0.05            TRAP       2       4

4522          KK   C4667
4523          KM        COMBINE HYDROGRAPHS
4524          HC       4

4525          KK  DV4669
4526          KM        DIVERT 100% OF RUNOFF S. ACROSS GUADALUPE RD TO R5109
4527          DT   D4669
4528          DI       0   10000
4529          DQ       0   10000

4530          KK   S4670
4531          KM        RUNOFF FROM SUBBASIN S4670
4532          BA   0.170
4533          LS              75
4534          UK     300   0.005     0.2     100
4535          RK    4500   0.002    0.04            TRAP       2       4

4536          KK  DV4671
4537          KM        DIVERT 100% OF RUNOFF S. ACROSS GUADALUPE RD TO R5111
4538          DT   D4671
4539          DI       0    1000
4540          DQ       0    1000

4541          KK   S4674
4542          KM        RUNOFF FROM SUBBASIN S4674
4543          BA   0.644
4544          LS              75
4545          UK     600   0.006    0.20     100
4546          RK    6900   0.009    0.04            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4547          KK   C4675
4548          KM        COMBINE S4674, DV4671, AND DV4669 TO EMPTY THE STACK
4549          HC       3

4550          KK  DV4677
4551          KM        DIVERT 100% OF RUNOFF S. ACROSS GUADALUPE RD TO R5089
4552          DT   D4677
4553          DI       0   10000
4554          DQ       0   10000

4555          KK   S4680
4556          KM        RUNOFF FROM SUBBASIN S4680
4557          BA   0.129
4558          LS             77
4559          UK     400  0.0057     0.2     100
4560          RK    4200  0.0067    0.04           TRAP       2       4

4561          KK   R4681
4562          KM        ROUTE HYDROGRAPH TO C4691
4563          RK    7600   0.009    0.04           TRAP      10       3     YES

4564          KK   S4684
4565          KM        RUNOFF FROM SUBBASIN S4684
4566          BA   0.152
4567          LS             77
4568          UK     600  0.0057     0.2     100
4569          RK    3700  0.0067    0.04           TRAP       2       4

4570          KK   R4685
4571          KM        ROUTE HYDROGRAPH TO C4691
4572          RK    7200   0.009    0.04           TRAP      10       3     YES

4573          KK   S4688
4574          KM        RUNOFF FROM SUBBASIN S4688
4575          BA   0.109
4576          LS             77
4577          UK     600  0.0057     0.2     100
4578          RK    2700  0.0065    0.04           TRAP       2       4

4579          KK   R4689
4580          KM        ROUTE HYDROGRAPH TO C4691
4581          RK    6400   0.009    0.04           TRAP      10       3     YES

4582          KK   S4690
4583          KM        RUNOFF FROM SUBBASIN S4690
4584          BA   0.928
4585          LS             75
4586          UK     800   0.007     0.2     100
4587          RK    6500   0.009    0.04           TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4588          KK   C4691
4589          KM        COMBINE FLOWS FROM S4690, R4689, R4685, R4681, AND DV4677
4590          HC       5

4591          KK  DV4693
4592          KM        DIVERT 100% OF FLOWS S. ACROSS GUADALUPE RD TO R5133
4593          DT   D4693
4594          DI       0   10000
4595          DQ       0   10000

4596          KK   S4696
4597          KM        RUNOFF FROM SUBBASIN S4696
4598          BA   0.043
4599          LS              77
4600          UK     300   0.007     0.2     100
4601          RK    1600   0.009    0.04            TRAP       2       4

4602          KK   R4697
4603          KM        ROUTE HYDROGRAPH TO C4701
4604          RK    8000   0.005    0.04            TRAP       2       4     YES

4605          KK   S4700
4606          KM        RUNOFF FROM SUBBASIN S4700
4607          BA    0.79
4608          LS              76
4609          UK     600   0.005     0.2     100
4610          RK    6400   0.007    0.04            TRAP       2       4

4611          KK   C4701
4612          KM        COMBINE HYDROGRAPHS S4700 AND R4697
4613          HC       2

4614          KK   R4703
4615          KM        ROUTE HYDROGRAPH TO C4709
4616          RK    5400  0.0047   0.035            TRAP       3      25

4617          KK   S4706
4618          KM        RUNOFF FROM SUBBASIN S4706
4619          BA   0.261
4620          LS              88
4621          UK     100  0.0035     0.2     100
4622          RK    5800  0.0074    0.02            TRAP       3      25

4623          KK   D4409
4624          KM        RETRIEVE DIVERTED HYDROGRAPH D4409
4625          DR   D4409

4626          KK   R4707
4627          KM        ROUTE HYDROGRAPH D4409 TO C4709
4628          RK    3000  0.0071   0.035            TRAP      25     2.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4629          KK   C4709
4630          KM        COMBINE FLOWS FROM R4707, S4706, AND R4703
4631          HC       3

4632          KK  DV4711
4633          KM        DIVERT 100% OF FLOW IN SOSSAMAN CHANNEL ALONG SOSSAMAN RD TO R4777
4634          DT   D4711
4635          DI       0   10000
4636          DQ       0   10000

4637          KK   S4714
4638          KM        RUNOFF FROM SUBBASIN S4714 (SB380A-CVL)
4639          BA   0.102
4640          LS             79
4641          UK     300   0.007    0.15     100
4642          RK    2700   0.006    0.02            TRAP      24       0

4643          KK   R4715
4644          KM        ROUTE FLOW DOWN BASELINE STORM DRAIN (36" & 54" MDLD AS A 65") TO C4719
4645          KM        (RO380-CVL)
4646          RK    1280  0.0070   0.012            CIRC     5.4             YES

4647          KK   S4718
4648          KM        RUNOFF FROM SUBBASIN S4718 (SB380B-CVL)
4649          BA   0.066
4650          LS             77
4651          UK     300   0.007    0.15     100
4652          RK    1000   0.006    0.02            TRAP      24       0

4653          KK   C4719
4654          KM        COMBINE S4718, R4715, AND DV4711
4655          HC       3

4656          KK   R4721
4657          KM        ROUTE FLOW DOWN BASELINE STORM DRAIN (36" & 54" MODELED AS A 68"),
4658          KM        TO C4727 (RO381-CVL)
4659          RK    1280   0.007   0.012            CIRC     5.4

4660          KK   S4722
4661          KM        RUNOFF FROM SUBBASIN S4722 (SB380 C-CVL)
4662          BA   0.016
4663          LS             82
4664          UK     300   0.007    0.15     100
4665          RK    1000   0.006    0.02            TRAP      24       0

4666          KK   S4726
4667          KM        RUNOFF FROM SUBBASIN S4726 (SB380D-CVL)
4668          BA   0.161
4669          LS             78
4670          UK     300   0.007    0.15     100
4671          RK    2500   0.006    0.02            TRAP      24       0
4672          RK    2000  0.0055    0.03            TRAP       5       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4673          KK   C4727
4674          KM        COMBINE S4726, S4722, AND R4721
4675          HC       3

4676          KK   R4729
4677          KM        ROUTE C4727 TO C4731 VIA BASELINE RD. STORM DRAIN
4678          KM        ROUTE FLOW DOWN BASELINE STORM DRAIN (2X54" MODELED AS A 76")
4679          RK    3600  0.0048   0.012            CIRC     6.4

4680          KK   S4730
4681          KM        RUNOFF FROM SUBBASIN S4730
4682          BA   0.307
4683          LS              79
4684          UK     800   0.007     0.2     100
4685          RK    1500  0.0045    0.04            TRAP       7       2
4686          RK    3600  0.0073    0.02            TRAP       9       1

4687          KK   C4731
4688          KM        COMBINE S4730 AND R4729
4689          HC       2

4690          KK   R4733
4691          KM        ROUTE C4731 TO C4735  VIA BASELINE RD STORM DRAIN
4692          KM        ROUTE FLOWS DOWN BASELINE STORM DRAIN (2X54" MODELED AS A 76")
4693          RK    2400  0.0048   0.012            CIRC     6.4

4694          KK    EMF8
4695          KM        COMBINE HYDROGRAPHS R4733, DV4693, AND C4535
4696          HC       3

4697          KK   R4737
4698          KM       ROUTE FLOW S. IN EMF   TO GUADALUPE ROAD C4741 (R0436-CVL)
4699          RK    6100  0.0003   0.025            TRAP      40       3

4700          KK   S4740
4701          KM        RUNOFF FROM SUBBASIN S4740 (SUB440-CVL)
4702          BA    0.26
4703          LS              77
4704          UK     600   0.002     0.2     100
4705          RK    1250  0.0030   0.030            TRAP      20       0

4706          KK   C4741
4707          KM        COMBINE S4740 AND R4737
4708          HC       2

4709          KK   S4744
4710          KM        RUNOFF FROM SUBBASIN S4744
4711          BA   0.517
4712          LS              81
4713          UK     800   0.007    0.20     100
4714          RK    5400   0.008    0.04            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4715          KK  DV4745
4716          KM        DIVERT 50% OF FLOW SOUTH ACROSS THE GUADALUPE RD. TO R5137
4717          DT   D4745
4718          DI       0      10   10000
4719          DQ       0       5    5000

4720          KK   R4747
4721          KM        ROUTE HYDROGRAPH DV4745 TO C4751
4722          RK    1400  0.0057    0.04            TRAP      10       3     YES

4723          KK   S4750
4724          KM        RUNOFF FROM SUBBASIN S4750
4725          BA   0.159
4726          LS             75
4727          UK     500   0.005     0.2     100
4728          RK    3500   0.008   0.040            TRAP       2       4

4729          KK   C4751
4730          KM        COMBINE HYDROGRAPHS S4750 AND R4747
4731          HC       2

4732          KK   R4753
4733          KM        ROUTE HYDROGRAPH C4751 TO C4757
4734          RK    1300  0.0057   0.040            TRAP      10       3

4735          KK   S4756
4736          KM        RUNOFF FROM SUBBASIN S4756
4737          BA   0.368
4738          LS             76
4739          UK     800   0.005     0.2     100
4740          RK    6000   0.005    0.04            TRAP       2       4

4741          KK   C4757
4742          KM        COMBINE HYDROGRAPHS S4756 AND R4753
4743          HC       2

4744          KK   R4759
4745          KM        ROUTE HYDROGRAPH C4757 TO C4761
4746          RK    1500  0.0057    0.04            TRAP      10       3

4747          KK   S4760
4748          KM        RUNOFF FROM SUBBASIN S4760
4749          BA   0.193
4750          LS             78
4751          UK     600   0.008     0.2     100
4752          RK    4800   0.007    0.04            TRAP       2       4

4753          KK   C4761
4754          KM        COMBINE HYDROGRAPHS S4760 AND R4759
4755          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4756          KK   R4763
4757          KM        ROUTE HYDROGRAPH C4761 TO C4767
4758          RK    1000  0.0057    0.04            TRAP      10       3

4759          KK   S4766
4760          KM        RUNOFF FROM SUBBASIN S4766
4761          BA   0.298
4762          LS             79
4763          UK     600  0.0047     0.2     100
4764          RK    4800  0.0074    0.04            TRAP       2       4

4765          KK   C4767
4766          KM        COMBINE HYDROGRAPH S4766 AND R4763
4767          HC       2

4768          KK   R4769
4769          KM        ROUTE HYDROGRAPH C4767 TO C4771
4770          RK    1300  0.0057    0.04            TRAP      10       3

4771          KK   S4770
4772          KM        RUNOFF FROM SUBBASIN S4770
4773          BA  0.2830
4774          LS             80
4775          UK     600  0.0047     0.2     100
4776          RK    5000  0.0074    0.04            TRAP       2       4

4777          KK   C4771
4778          KM        COMBINE FLOWS FROM S4770 AND R4769
4779          HC       2

4780          KK   R4773
4781          KM        ROUTE HYDROGRAPH C4771 TO C4783
4782          RK    1200  0.0054    0.04            TRAP      10       3

4783          KK   S4776
4784          KM        RUNOFF FROM SUBBASIN S4776
4785          BA   0.229
4786          LS             73
4787          UK     600  0.0055     0.2     100
4788          RK    5200  0.0015   0.035            TRAP      50     2.5

4789          KK   D4711
4790          KM        RETRIEVE DIVERTED HYDROGRAPH D4711
4791          DR   D4711

4792          KK   R4777
4793          KM        ROUTE HYDROGRAPH S. IN SOSSAMAN CHANNEL (BW=49'), (RO364-CVL)
4794          RK    3000  0.0015   0.035            TRAP      40     2.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4795          KK   R4779
4796          KM        ROUTE HYDROGRAPH S. IN SOSSAMAN CHANNEL (BW=50'), (RO366-CVL)
4797          RK    1100  0.0015   0.035            TRAP      50     2.5

4798          KK   R4781
4799          KM        ROUTE HYDROGRAPH S. IN SOSSAMAN CHANNEL (BW=60'),(RO368-CVL)
4800          RK    1100  0.0015   0.035            TRAP      60     2.5

4801          KK   C4783
4802          KM        COMBINE HYDROGRAPHS R4781, R4779, R4777, S4776, AND R4773 AT
4803          KM        SOSSAMAN CNANNEL  AND GUADALUPE RD
4804          HC       3

4805          KK  DV4785
4806          KM        FLOW SPLIT AT SOSSAMAN CHANNEL AND GUADALUPE RD (DIV370-CVL) TO R5281
4807          DT   D4785
4808          DI       0     530     930    1500    2240    4100    7500
4809          DQ       0       0      90     300     640    1780    5180

4810          KK   R4787
4811          KM        ROUTE DV4785 W. IN GUADALUPE RD (RO372-CVL) TO C4791
4812          RK    5300  0.0025   0.035            TRAP      40     2.5

4813          KK   S4790
4814          KM        RUNOFF FROM SUBBASIN S4790 (SUB374-CVL)
4815          BA    1.02
4816          LS              75
4817          UK    1250   0.002     0.2     100
4818          RK    5000   0.006    0.04    0.07    TRAP       2       4
4819          RK    4000  0.0033    0.02            TRAP      40       0

4820          KK   C4791
4821          KM        COMBINE S4790 AND R4787 AT POWER RD AND GUADALUPE RD
4822          HC       2

4823          KK    EMF9
4824          KM        COMBINE C4791 AND C4741 IN EMF
4825          HC       2

4826          KK   R4797
4827          KM        ROUTE COMBINED HYDROGRAPH TO EMF10
4828          RK    5630   0.008   0.025            TRAP     145       3
              *       EASTERN MARICOPA COUNTY MASTER DRAINAGE PLAN (EADMS144)
              *       BETWEEN GUADALUPE AND POWERLINE FLOODWAY

4829          KK   D4589
4830          KM        RETRIEVE DIVERTED HYDROGRAPH D4589 FROM N. OF GUADALUPE
4831          DR   D4589
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4832          KK   R5001
4833          KM        ROUTE D4589 THROUGH S5004 TO C5005
4834          RK    4600    0.008    0.04            TRAP       2       4

4835          KK   S5004
4836          KM        RUNOFF FROM SUBBASIN S5004
4837          BA   0.394
4838          LS              79
4839          UK    6000  0.0072    0.200     100
4840          RK    6200    0.008    0.040            TRAP       2       4

4841          KK   C5005
4842          KM        COMBINE HYDROGRAPHS FROM S5004 AND R5001
4843          HC       2

4844          KK   R5007
4845          KM        ROUTE C5005 THROUGH S5020 TO C5021
4846          RK    4400    0.008    0.040            TRAP       2       4

4847          KK   S5010
4848          KM        RUNOFF FROM SUBBASIN S5010
4849          BA    0.34
4850          LS              79
4851          UK     500  0.0072    0.200     100
4852          RK    3800    0.008    0.040            TRAP       2       4

4853          KK   R5011
4854          KM        ROUTE S5010 TO C5021
4855          RK    6200    0.008    0.040            TRAP      10       3     YES

4856          KK   S5014
4857          KM        RUNOFF FROM SUBBASIN S5014
4858          BA    0.11
4859          LS              79
4860          UK     300  0.0072    0.200     100
4861          RK    4600    0.008    0.040            TRAP       2       4

4862          KK   R5015
4863          KM        ROUTE HYDROGRAPH S5014 TO C5021
4864          RK    3400    0.008    0.040            TRAP       2       4     YES

4865          KK   S5020
4866          KM        RUNOFF FROM SUBBASIN S5020
4867          BA    0.52
4868          LS              79
4869          UK     600  0.0072    0.200     100
4870          RK    6400    0.008    0.040            TRAP      10       3

4871          KK   C5021
4872          KM        COMBINE HYDROGRAPHS FROM S5020, R5015, R5011, AND R5007
4873          HC       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4874          KK   R5023
4875          KM        ROUTE C5021 TO C5039
4876          RK    5200   0.008   0.040            TRAP       2       4

4877          KK   D4591
4878          KM        RETRIEVE DIVERTED HYDROGRAPH D4591 FROM N. OF GUADALUPE RD.
4879          DR   D4591

4880          KK   R5025
4881          KM        ROUTE D4591 TO C5031
4882          RK    4200   0.008   0.040            TRAP       2       4

4883          KK   S5030
4884          KM        RUNOFF FROM SUBBASIN S5030
4885          BA    0.18
4886          LS              79
4887          UK     400  0.0072   0.200     100
4888          RK    4200  0.0080   0.040            TRAP       2       4

4889          KK   C5031
4890          KM        COMBINE HYDROGRAPHS S5030 AND R5025
4891          HC       2

4892          KK   R5033
4893          KM        ROUTE HYDROGRAPH C5031 TO C5039
4894          RK    5600  0.0074   0.040            TRAP      10       4

4895          KK   S5038
4896          KM        RUNOFF FROM SUBBASIN S5038
4897          BA    0.37
4898          LS              79
4899          UK     800  0.0076   0.200     100
4900          RK    1000  0.0076   0.040            TRAP       2       4
4901          RK    5400  0.0072   0.040            TRAP       2       4

4902          KK   C5039
4903          KM        COMBINE FLOWS FROM S5038, R5033, AND R5023
4904          HC       3

4905          KK   R5041
4906          KM        ROUTE C5039 TO C5067
4907          RK    4400  0.0074   0.040            TRAP      10       3

4908          KK   D4601
4909          KM        RETRIEVE DIVERTED HYDROGRAPH D4601
4910          DR   D4601

4911          KK   R5043
4912          KM        ROUTE HYDROGRAPH D4601 TO C5047
4913          RK    4600  0.0070   0.040            TRAP       2       4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4914          KK   S5046
4915          KM        RUNOFF FROM SUBBASIN S5046
4916          BA    0.17
4917          LS              79
4918          UK     600  0.0051   0.200     100
4919          RK    4400   0.007   0.040           TRAP     2       4

4920          KK   C5047
4921          KM        COMBINE HYDROGRAPHS FROM S5046 AND R5043
4922          HC       2

4923          KK   R5049
4924          KM        ROUTE C5047 TO C5051
4925          RK     300  0.0070   0.040           TRAP     2       4

4926          KK   S5050
4927          KM        RUNOFF FROM SUBBASIN S5050
4928          BA   0.102
4929          LS              79
4930          UK     500  0.0051   0.200     100
4931          RK    3000  0.0070   0.040           TRAP     2       4

4932          KK   C5051
4933          KM        COMBINE HYDROGRAPHS FROM S5050 AND R5049
4934          HC       2

4935          KK   R5053
4936          KM        ROUTE C5051 TO C5067
4937          RK    5400  0.0074   0.040           TRAP    10       3

4938          KK   D4613
4939          KM        RETRIEVE DIVERTED HYDROGRAPH D4613 FROM N. OF GUADALUPE RD.
4940          DR   D4613

4941          KK   R5055
4942          KM        ROUTE D4613 TO C5061
4943          RK    4400  0.0070   0.040           TRAP     2       4

4944          KK   S5060
4945          KM        RUNOFF FROM SUBBASIN S5060
4946          BA    0.29
4947          LS              79
4948          UK     500  0.0051   0.200     100
4949          RK    4400  0.0070   0.040           TRAP     2       4

4950          KK   C5061
4951          KM        COMBINE HYDROGRAPHS S5060 AND R5055
4952          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4953          KK   R5063
4954          KM        ROUTE C5061 TO C5067
4955          RK    6000  0.0074   0.040            TRAP      10       3

4956          KK   S5066
4957          KM        RUNOFF FROM SUBBASIN S5066
4958          BA    0.43
4959          LS             79
4960          UK     700  0.0047   0.200     100
4961          RK    6500  0.0074   0.040            TRAP       2       4

4962          KK   C5067
4963          KM        COMBINE FLOWS FROM S5066, R5063 , R5053, AND R5041
4964          HC       4

4965          KK   R5069
4966          KM        ROUTE HYDROGRAPH C5067 TO C5071
4967          RK    2500  0.0042   0.040            TRAP      10       2

4968          KK   S5070
4969          KM        RUNOFF FROM SUBBASIN S5070
4970          BA    0.35
4971          LS             79
4972          UK     800  0.0038   0.200     100
4973          RK    3000  0.0040   0.040            TRAP      10       2
4974          RK    7000  0.0056   0.040            TRAP       2       4

4975          KK   C5071
4976          KM        COMBINE FLOWS FROM S5070 AND R5069
4977          HC       2

4978          KK   R5073
4979          KM        ROUTE HYDROGRAPH C5071 TO C5083
4980          RK    3000  0.0059   0.040            TRAP      10       2

4981          KK   S5080
4982          KM        RUNOFF FROM SUBBASIN S5080
4983          BA   0.436
4984          LS             79
4985          UK     800  0.0060   0.200     100
4986          RK   10200  0.0065   0.040            TRAP      10       3

4987          KK  DV5081
4988          KM         DIVERT 10% OF FLOW ACROSS ELLSWORTH RD TO C5121
4989          DT   D5081
4990          DI       0     100   10000
4991          DQ       0      10    1000

4992          KK   C5083
4993          KM        COMBINE HYDROGRAPHS DV5081 AND R5073
4994          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

4995          KK  DV5085
4996          KM        DIVERT 100% OF RUNOFF ACROSS ELLIOT RD. TO DV5179
4997          DT   D5085
4998          DI       0   10000
4999          DQ       0   10000

5000          KK   D4677
5001          KM        RETRIEVE DIVERTED FLOW D4677 FROM N. OF GUADALUPE RD.
5002          DR   D4677

5003          KK  DV5087
5004          KM        DIVERT 75% OF FLOW W. ACROSS ELLSWORTH TO R5131
5005          DT   D5087
5006          DI       0     100   10000
5007          DQ       0      75    7500

5008          KK   R5089
5009          KM        ROUTE HYDROGRAPH D5087 TO C5091
5010          RK     800   0.003   0.040            TRAP       5       1

5011          KK   S5090
5012          KM        RUNOFF FROM SUBBASIN S5090
5013          BA   0.085
5014          LS              79
5015          UK     400  0.0057   0.200     100
5016          RK    2800  0.0056   0.040            TRAP       2       4

5017          KK   C5091
5018          KM        COMBINE FLOWS FROM SUBBASIN S5090 AND R5089
5019          HC       2

5020          KK  DV5093
5021          KM        DIVERT 75% OF RUNOFF W. ACROSS ELLSWORTH
5022          DT   D5093
5023          DI       0     100   10000
5024          DQ       0      75    7500

5025          KK   R5095
5026          KM        ROUTE HYDROGRAPH DV5093 S. ALONG ELLSWORTH TO C5101
5027          RK    1500   0.003   0.040            TRAP       5       1

5028          KK   S5100
5029          KM        RUNOFF FROM SUBBASIN S5100
5030          BA   0.055
5031          LS              79
5032          UK     300  0.0056   0.200     100
5033          RK    2200  0.0056   0.040            TRAP       2       4

5034          KK   C5101
5035          KM        COMBINE FLOWS FROM S5100 AND R5095
5036          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5037          KK  DV5103
5038          KM        DIVERT 90% OF FLOW W. ACROSS ELLSWORTH ST. TO R5149
5039          DT   D5103
5040          DI       0     100   10000
5041          DQ       0      90    9000

5042          KK   D4647
5043          KM        RETRIEVE DIVERTED HYDROGRAPH D4647 FROM N. OF GUADALUPE RD.
5044          DR   D4647

5045          KK   R5105
5046          KM        ROUTE HYDROGRAPH D4647 THROUGH S5114 TO C5115
5047          RK    8400  0.0065   0.040            TRAP      10       3

5048          KK   D4651
5049          KM        RETRIEVE DIVERTED HYDROGRAPH D4651 FROM N. OF GUADALUPE RD.
5050          DR   D4651

5051          KK   R5107
5052          KM        ROUTE HYDROGRAPH D4651 TO C5115
5053          RK    7600  0.0065   0.040            TRAP      10       3

5054          KK   D4669
5055          KM        RETRIEVE DIVERTED HYDROGRAPH D4669 FROM N. OF GUADALUPE RD.
5056          DR   D4669

5057          KK   R5109
5058          KM        ROUTE HYDROGRAPH D4669 TO C5115
5059          RK    6400   0.006   0.040            TRAP      10       3

5060          KK   D4671
5061          KM        RETRIEVE DIVERTED HYDROGRAPH D4671 FROM N. OF GUADALUPE RD.
5062          DR   D4671

5063          KK   R5111
5064          KM        ROUTE HYDROGRAPH D4671 TO C5115
5065          RK    5600  0.0060   0.040            TRAP      10       2

5066          KK   S5114
5067          KM        RUNOFF FROM SUBBASIN S5114
5068          BA   0.055
5069          LS             79
5070          UK     800  0.0050   0.200     100
5071          RK    6600  0.0060   0.040            TRAP      10       3

5072          KK   C5115
5073          KM         COMBINE HYDROGRAPHS FROM S5114, R5111, R5109, R5107, AND R5105
5074          HC       5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5075          KK  DV5117
5076          KM        DIVERT 90% OF THE FLOW TO R5151
5077          DT   D5117
5078          DI       0     100   10000
5079          DQ       0      90    9000

5080          KK   R5119
5081          KM        ROUTE HYDROGRAPH DV5117 S. ALONG SLLSWORTH ST. TO C5121
5082          RK    1000   0.003   0.040            TRAP       5       2

5083          KK   D5081
5084          KM        RETRIEVE DIVERTED HYDROGRAPH D5081
5085          DR   D5081

5086          KK   C5121
5087          KM        COMBINE HYDROGRAPHS D5081, R5119, DV5103, AND DV5085
5088          HC       4

5089          KK   R5123
5090          KM        ROUTE HYDROGRAPH C5121 TO C5127
5091          RK    2200  0.0058   0.040            TRAP       2       4

5092          KK   S5126
5093          KM        RUNOFF FROM SUBBASIN S5126
5094          BA  0.0108
5095          LS              79
5096          UK     400   0.003   0.200     100
5097          RK    2200  0.0058   0.040            TRAP       2       4

5098          KK   C5127
5099          KM        COMBINE HYDROGRAPHS FROM S5126 AND R5123
5100          HC       2

5101          KK   R5129
5102          KM        ROUTE HYDROGRAPH C5127 TO C5159
5103          RK    3200  0.0050   0.040            TRAP      10       3

5104          KK   D5087
5105          KM        RETRIEVE DIVERTED HYDROGRAPH D5087
5106          DR   D5087

5107          KK   R5131
5108          KM        ROUTE DIVERTED HYDROGRAPH D5087 TO C5139
5109          RK    6800  0.0058   0.050            TRAP      10       3

5110          KK   D4693
5111          KM        RETRIEVE DIVERTED HYDROGRAPH D4693
5112          DR   D4693
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5113          KK   R5133
5114          KM        ROUTE HYDROGRAPH D4693 TO C5139
5115          RK    5200  0.0058   0.040            TRAP       4       2

5116          KK   D4745
5117          KM        RETRIEVE DIVERTED HYDROGRAPH D4745
5118          DR   D4745

5119          KK   R5135
5120          KM        ROUTE DIVERTED HYDROGRAPH D4745 TO C5139
5121          RK    3000  0.0058   0.050            TRAP       4       2

5122          KK   D5093
5123          KM        RETREIEVE DIVERTED HYDROGRAPH
5124          DR   D5093

5125          KK   R5137
5126          KM        ROUTE DIVERTED HYDROGRAPH TO C5139
5127          RK    5500  0.0058   0.050            TRAP      10      30

5128          KK   S5138
5129          KM        RUNOFF FROM SUBBASIN S5138
5130          BA   0.492
5131          LS             79
5132          UK     800  0.0057   0.200     100
5133          RK    6800  0.0057   0.040            TRAP      10       3

5134          KK   C5139
5135          KM        COMBINE HYDROGRAPHS S5138, R5137, R5133, AND R5131
5136          HC       5

5137          KK  DV5141
5138          KM        DIVERT 50% OF FLOW ACROSS HAWES RD. TO R5273
5139          DT   D5141
5140          DI       0     100   10000
5141          DQ       0      50    5000

5142          KK   R5143
5143          KM        ROUTE HYDROGRAPH DV5141 TO C5153
5144          RK    2200  0.0025   0.040            TRAP      10       3

5145          KK   S5146
5146          KM        RUNOFF FROM SUBBASIN S5146
5147          BA   0.462
5148          LS             79
5149          UK     700   0.003   0.200     100
5150          RK    1000   0.003   0.040    0.06    TRAP       4       2
5151          RK    5600  0.0058   0.060            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5152          KK   D5103
5153          KM        RETRIEVE DIVERTED HYDROGRAPH D5103
5154          DR   D5103

5155          KK   R5149
5156          KM        ROUTE HYDROGRAPH D5103 TO C5153
5157          RK    5800  0.0058   0.060            TRAP      10       3

5158          KK   D5117
5159          KM        RETRIEVE DIVERTED HYDROGRAPH D5117
5160          DR   D5117

5161          KK   R5151
5162          KM        ROUTE RETRIEVED HYDROGRAPH D5117 TO C5153
5163          RK    5600  0.0058   0.060            TRAP      10       3

5164          KK   C5153
5165          KM        COMBINE FLOWS FROM R5151, R5149, S5146, AND R5143
5166          HC       4

5167          KK  DV5155
5168          KM        DIVERT 75% OF FLOW W. ACROSS HAWES RD. TO C5269
5169          DT   D5155
5170          DI       0     100   10000
5171          DQ       0      75    7500

5172          KK   R5157
5173          KM        ROUTE HYDROGRAPH DV5155 S. ACROSS ELLIOT RD. TO C5159
5174          RK    1400  0.0020   0.050            TRAP      10       3

5175          KK   C5159
5176          KM        COMBINE FLOWS FROM R5157 AND R5129
5177          HC       2

5178          KK  DV5161
5179          KM        DIVERT 90% OF FLOW W. ACROSS HAWES RD. TO R5301
5180          DT   D5161
5181          DI       0     100   10000
5182          DQ       0      90    9000

5183          KK   R5163
5184          KM        ROUTE HYDROGRAPH DV5161 TO C5173
5185          RK    1700  0.0020   0.050            TRAP      10       3

5186          KK   S5170
5187          KM        RUNOFF FROM SUBBASIN S5170
5188          BA   0.308
5189          LS              79
5190          UK     800  0.0057   0.200     100
5191          RK    5200  0.0058   0.050            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5192          KK   C5173
5193          KM        COMBINE HYDROGRAPHS FROM S5170 AND R5163
5194          HC       2

5195          KK  DV5175
5196          KM        DIVERT 50% OF RUNOFF W. ACROSS HAWES RD. TO R5299
5197          DT   D5175
5198          DI       0     100   10000
5199          DQ       0      50    5000

5200          KK   R5177
5201          KM        ROUTE HYDROGRAPH DV5175 TO C5259
5202          RK    4200   0.004   0.050            TRAP      10       3

5203          KK   D5085
5204          KM        RETRIEVE DIVERTED HYDROGRAPH D5085
5205          DR   D5085

5206          KK  DV5179
5207          KM        DIVERT 50% OF FLOW W. ACROSS ELLSWORTH ST. TO R5217
5208          DT   D5179
5209          DI       0     100   10000
5210          DQ       0      50    5000

5211          KK   R5181
5212          KM        ROUTE HYDROGRAPH DV5179 TO DV5183
5213          RK     800  0.0021   0.040            TRAP       2       6

5214          KK  DV5183
5215          KM        DIVERT 80% OF FLOW W. ACROSS ELLSWORTH THROUGH PIPE CULVERT  TO R5219
5216          DT   D5183
5217          DI       0     100   10000
5218          DQ       0      80    8000

5219          KK   R5185
5220          KM        ROUTE HYDROGRAPH DV5183 TO DV5187
5221          RK     400  0.0021   0.040            TRAP       2       6

5222          KK  DV5187
5223          KM        DIVERT FLOWS W. ACROSS ELLSWORTH THROUGH PIPE CULVERT TO R5221
5224          DT   D5187
5225          DI       0      10      25    1000
5226          DQ       0      10      25      30

5227          KK   R5189
5228          KM        ROUTE HYDROGRAPH DV5187 TO DV5191
5229          RK     400   0.002   0.040            TRAP       2       6

5230          KK  DV5191
5231          KM        DIVERT FLOW W. THROUGH PIPE CULVERT TO R5223
5232          DT   D5191
5233          DI       0      10      25    1000
5234          DQ       0      10      25      30
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5235          KK   R5193
5236          KM        ROUTE HYDROGRAPH DV5191 TO DV5195
5237          RK     400  0.0021   0.040            TRAP       2       6

5238          KK  DV5195
5239          KM        ROUTE 80% OF FLOW W. ACROSS ELLSWORTH ST. TO R5225
5240          DT   D5195
5241          DI       0     100   10000
5242          DQ       0      80    8000

5243          KK   R5197
5244          KM        ROUTE HYDROGRAPH DV5195 TO DV5199
5245          RK     800  0.0021   0.040            TRAP       2       6

5246          KK  DV5199
5247          KM        DIVERT FLOWS THROUGH PIPE CULVERT TO R5237
5248          DT   D5199
5249          DI       0      10      15    1000
5250          DQ       0      10      15      17

5251          KK   R5201
5252          KM        ROUTE HYDROGRAPH DV5199 TO DV5203
5253          RK     800   0.002   0.040            TRAP       2       6

5254          KK  DV5203
5255          KM        DIVERT 100% OF FLOW W. ACROSS ELLSWORTH ST. TO R5239
5256          DT   D5203
5257          DI       0   10000
5258          DQ       0   10000

5259          KK   S5204
5260          KM        RUNOFF FROM SUBBASIN S5204
5261          BA   0.899
5262          LS              79
5263          UK     800  0.0057   0.200     100
5264          RK    3000  0.0050   0.040            TRAP       2       4
5265          RK    6200  0.0050   0.040            TRAP       4       2

5266          KK   C5205
5267          KM        COMBINE FLOWS FROM DV5203 AND 5204
5268          HC       2

5269          KK  DV5206
5270          KM        DIVERT 50% OF FLOW FROM F.M. FIELD PIPES W. ACROSS ELLSWORTH ST TO R5241
5271          DT   D5206
5272          DI       0     100   10000
5273          DQ       0      50    5000

5274          KK   R5207
5275          KM        ROUTE HYDROGRAPH DV5206 TO DV5209
5276          RK    1000   0.002   0.040            TRAP       2       6
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5277          KK  DV5209
5278          KM        DIVERT FLOWS W. ACROSS ELLSWORTH ST THROUGH 2 PIPE CULVERTS TO R5243
5279          DT   D5209
5280          DI       0     110   10000
5281          DQ       0      50      55

5282          KK   S5210
5283          KM        RUNOFF FROM SUBBASIN S5210
5284          BA   1.062
5285          LS              80
5286          UK     800  0.0057   0.200     100
5287          RK    4000  0.0047   0.040    0.02    TRAP       2       4
5288          RK    8000  0.0050   0.040            TRAP       5       4

5289          KK   C5213
5290          KM        COMBINE HYDROGRAPHS S5210, DV5209, AND DV5203
5291          HC       2

5292          KK  DV5215
5293          KM        DIVERT 100% OF RUNOFF W. ACROSS ELLSWORTH ST. TO R5333
5294          DT   D5215
5295          DI       0   10000
5296          DQ       0   10000

5297          KK   D5179
5298          KM        RETRIEVE DIVERTED HYDROGRAPH D5179
5299          DR   D5179

5300          KK   R5217
5301          KM        ROUTE DIVERTED HYDROGRAPH D5179 TO C5227
5302          RK    5900  0.0050   0.060            TRAP      10       3

5303          KK   D5183
5304          KM        RETRIEVE DIVERTED HYDROGRAPH D5183
5305          DR   D5183

5306          KK   R5219
5307          KM        ROUTE DIVERTED HYDROGRAPH D5183 TO C5227
5308          RK    5300  0.0050   0.060            TRAP      10       3

5309          KK   D5187
5310          KM        RETRIEVE DIVERTED HYDROGRAPH D5187
5311          DR   D5187

5312          KK   R5221
5313          KM        ROUTE DIVERTED HYDROGRAPH D5187 TO C5227
5314          RK    5200  0.0050   0.060            TRAP      10       3

5315          KK   D5191
5316          KM        RETRIEVE DIVERTED HYDROGRAPH D5191
5317          DR   D5191
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5318          KK   R5223
5319          KM        ROUTE DIVERTED HYDROGRAPH D5191 TO C5227
5320          RK    4200  0.0050   0.060            TRAP      10       3

5321          KK   D5195
5322          KM        RETRIEVE DIVERTED HYDROGRAPH D5195
5323          DR   D5195

5324          KK   R5225
5325          KM        ROUTE DIVERTED HYDROGRAPH D5195 TO C5227
5326          RK    4200  0.0050   0.060            TRAP      10       3

5327          KK   C5227
5328          KM        COMBINE HYDROGRAPHS FROM R5225, R5223, R5221, R5219, AND R5217
5329          HC       5   0.001

5330          KK   S5230
5331          KM        RUNOFF FROM SUBBASIN S5230
5332          BA   0.790
5333          LS             80
5334          UK     800  0.0021   0.200     100
5335          RK    1400  0.0021   0.040    0.02    TRAP       4       2
5336          RK    4800  0.0050   0.060            TRAP      10       3

5337          KK   C5233
5338          KM        COMBINE HYDROGRAPHS FROM S5230, C5227, AND DV5215
5339          HC       3

5340          KK  DV5235
5341          KM        DIVERT 50% OF FLOWS W. ACROSS HAWES RD. TO R5255
5342          DT   D5235
5343          DI       0     100   10000
5344          DQ       0      50    5000

5345          KK   D5199
5346          KM        RETRIEVE DIVERTED HYDROGRAPH D5199
5347          DR   D5199

5348          KK   R5237
5349          KM        ROUTE DIVERTED HYDROGRAPH D5199 TO C5245
5350          RK    4200  0.0050   0.050            TRAP      10       3

5351          KK   D5203
5352          KM        RETRIEVE DIVERTED HYDROGRAPH D5203
5353          DR   D5203

5354          KK   R5239
5355          KM        ROUTE DIVERTED HYDROGRAPH D5203 TO C5245
5356          RK    3000  0.0050   0.050            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5357          KK   D5206
5358          KM        RETRIEVE DIVERTED HYDROGRAPH D5205
5359          DR   D5206

5360          KK   R5241
5361          KM        ROUTE RETRIEVED HYDROGRAPH D5205 TO C5245
5362          RK    2600  0.0050   0.050            TRAP      10       3

5363          KK   D5209
5364          KM        RETRIEVE DIVERTED HYDROGRAPH D5209
5365          DR   D5209

5366          KK   R5243
5367          KM        ROUTE RETRIEVED HYDROGRAPH D5209 TO C5245
5368          RK    2600  0.0050   0.040            TRAP       5       2

5369          KK   C5245
5370          KM        COMBINE HYDROGRAPHS FROM R5243, R5241, R5239, AND R5237
5371          HC       4    .001

5372          KK   R5247
5373          KM        ROUTE C5245 TO C5249
5374          RK    1300  0.0049   0.040            TRAP       5       2

5375          KK   C5249
5376          KM        COMBINE FLOWS FROM R5247 AND DV5235
5377          HC       2

5378          KK  DV5251
5379          KM        DIVERT 30% OF FLOW AS SHEET FLOW S. ACROSS WARNER RD. TO R5319
5380          DT   D5251
5381          DI       0     100   10000
5382          DQ       0      30    3000

5383          KK   R5253
5384          KM        ROUTE HYDROGRAPH DV5251 TO C5259
5385          RK    4400  0.0049   0.040            TRAP       5       2

5386          KK   D5235
5387          KM        RETRIEVE DIVERTED HYDROGRAPH D5235
5388          DR   D5235

5389          KK   R5255
5390          KM        ROUTE RETRIEVED HYDROGRAPH D5235 TO C5259
5391          RK    3400  0.0049   0.040            TRAP       5       2

5392          KK   S5258
5393          KM        RUNOFF FROM SUBBASIN S5258
5394          BA   0.128
5395          LS             79
5396          UK     400  0.0049   0.200     100
5397          RK    3400  0.0043   0.050            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5398          KK   C5259
5399          KM        COMBINE HYDROGRAPHS FROM S5258, R5255, R5253, AND R5177
5400          HC       4

5401          KK  DV5261
5402          KM        DIVERT 25% OF FLOWS S. ACROSS WARNER RD. AS A SHEET FLOW TO R5321
5403          DT   D5261
5404          DI       0     100   10000
5405          DQ       0      25    2500

5406          KK  DV5263
5407          KM        DIVERT 100% OF FLOW OUT OF SYSTEM TO R5297
5408          DT   D5263
5409          DI       0   10000
5410          DQ       0   10000

5411          KK   D5155
5412          KM        RETRIEVE DIVERTED HYDROGRAPH D5155
5413          DR   D5155

5414          KK   S5266
5415          KM        RUNOFF FROM SUBBASIN S5266
5416          BA   0.088
5417          LS             79
5418          UK     600  0.0055   0.200     100
5419          RK    1400  0.0056   0.060            TRAP      10       3

5420          KK   C5269
5421          KM        COMBINE HYDROGRAPHS FROM S5266 AND D5155
5422          HC       2

5423          KK  DV5271
5424          KM        DIVERT C5269 OUT OF SYSTEM TO R5303
5425          DT   D5271
5426          DI       0   10000
5427          DQ       0   10000

5428          KK   D5141
5429          KM        RETRIEVE DIVERTED HYDROGRAPH D5141
5430          DR   D5141

5431          KK   R5273
5432          KM        ROUTE RETRIEVED HYDROGRAPH D5141 TO C5277
5433          RK    6800  0.0056   0.060            TRAP      10       3

5434          KK   S5276
5435          KM        RUNOFF FROM SUBBASIN S5276
5436          BA   0.473
5437          LS             78
5438          UK     800  0.0025   0.200     100
5439          RK    6800  0.0056   0.060            TRAP      10       3
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5440          KK   C5277
5441          KM        COMBINE HYDROGRAPHS S5276 AND R5273
5442          HC       2

5443          KK   D5279
5444          KM        DIVERT 100% OF FLOW OUT OF SYSTEM TO C5305
5445          DT   D5279
5446          DI       0   10000
5447          DQ       0   10000

5448          KK   D4785
5449          KM        RETRIEVE DIVERTED HYDROGRAPH D4785 FROM EADMS142
5450          DR   D4785

5451          KK   R5281
5452          KM        ROUTE RETRIEVED HYDROGRAPH D4785 TO C5285
5453          RK    5280  0.0023   0.035            TRAP      30       4

5454          KK   S5284
5455          KM        RUNOFF FROM SUBBASIN S5284
5456          BA    0.48
5457          LS              79
5458          UK     800  0.0057   0.200     100
5459          RK    4400  0.0056   0.050   0.200    TRAP       4       2
5460          RK    3600  0.0023   0.035            TRAP      30       4

5461          KK   C5285
5462          KM        COMBINE HYDROGRAPHS S5284 AND R5281 AT SOSSAMAN AND ELLIOT
5463          HC       2

5464          KK  DV5287
5465          KM        DIVERT PART OF FLOW S. ACROSS ELLIOT RD. THROUGH 2-10'X 5' B.C. TO C5305
5466          DT   D5287
5467          DI       0    1000    1400    2000   10000
5468          DQ       0    1000    1400    1400    1400

5469          KK   R5289
5470          KM        ROUTE HYDROGRAPH DV5287 ALONG ELLIOT RD. TO C5291
5471          RK    3400  0.0051   0.035            TRAP      30       4

5472          KK   S5290
5473          KM        RUNOFF FROM SUBBASIN S5290
5474          BA    0.76
5475          LS              75
5476          UK     800   0.006   0.200     100
5477          RK    3500   0.004   0.040   0.050    TRAP       2       4
5478          RK    5630  0.0003   0.025            TRAP     145       3

5479          KK   C5291
5480          KM        COMBINE FLOWS FROM S5290, R5289, D5279, DV5271, AND DV5263
5481          HC       5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5482          KK   EMF10
5483          KM        COMBINE HYDROGRAPHS FROM C5291 AND R4797
5484          HC       2

5485          KK   R5295
5486          KM        ROUTE FLOW FROM EMF10 TO EMF10
5487          RK    6030   0.003   0.025            TRAP     150       3

5488          KK   D5263
5489          KM        RETRIEVE DIVERTED HYDROGRAPH D5263
5490          DR   D5263

5491          KK   R5297
5492          KM        ROUTE HYDROGRAPH D5263 TO C5309 AT SOSSAMAN AND WARNER RDS.
5493          RK    2500  0.0049   0.040            TRAP       5       2

5494          KK   D5175
5495          KM        RETRIEVE DIVERTED HYDROGRAPH D5175
5496          DR   D5175

5497          KK   D5161
5498          KM        RETRIEVE DIVERTED HYDROGRAPH D5161
5499          DR   D5161

5500          KK   C5299
5501          KM        COMBINE RUNOFFS FROM D5175 AND D5161
5502          HC       2    .001

5503          KK   R5301
5504          KM        ROUTE C5299 TO C5309
5505          RK    5800  0.0043   0.040            TRAP      10       3

5506          KK   D5271
5507          KM        RETRIEVE DIVERTED HYDROGRAPH D5271
5508          DR   D5271

5509          KK   R5303
5510          KM        ROUTE RETRIEVED HYDROGRAPH D5271 TO C5309
5511          RK    7400  0.0043  0.0060            TRAP      10       3

5512          KK   D5279
5513          KM        RETRIEVE DIVERTED HYDROGRAPH D5279
5514          DR   D5279

5515          KK   D5287
5516          KM        RETRIEVE DIVERTED HYDROGRAPH D5287
5517          DR   D5287

5518          KK   C5305
5519          KM        COMBINE FLOWS FROM D5287 AND D5279
5520          HC       2    .001
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5521          KK   R5307
5522          KM        ROUTE C5305 TO C5309 AT SOSSAMAN AND WARNER RDS.
5523          RK    5280   0.003   0.035            TRAP      30       4

5524          KK   S5308
5525          KM        RUNOFF FROM SUBAREA 5308
5526          BA    0.88
5527          LS              79
5528          UK     850   0.006   0.200     100
5529          RK    6000  0.0058   0.050            TRAP      10       3

5530          KK   C5309
5531          KM        COMBINE FLOWS FROM S5308, R5307, R5303, R5301, AND R5297
5532          HC       5

5533          KK  DV5311
5534          KM        DIVERT 100% OF FLOW OUT OF SYSTEM TO R5323
5535          DT   D5311
5536          DI       0   10000
5537          DQ       0   10000

5538          KK   S5314
5539          KM        RUNOFF FROM SUBBASIN S5314
5540          BA    0.77
5541          LS              78
5542          UK     250   0.007   0.200     100
5543          RK    3500  0.0043   0.040    0.05    TRAP      20       4
5544          RK    6030  0.0003   0.025            TRAP     150       3

5545          KK   EMF11
5546          KM        COMBINE FLOWS FROM S5314, DV5311, AND R5295
5547          HC       3

5548          KK   R5317
5549          KM        ROUTE EMF11 TO C5329
5550          RK    1400  0.0003   0.035            TRAP     150       3

5551          KK   D5251
5552          KM        RETRIEVE DIVERTED HYDROGRAPH D5251
5553          DR   D5251

5554          KK   R5319
5555          KM        ROUTE RETRIEVED HYDROGRAPH D5251 TO C5329
5556          RK    7000  0.0049   0.040            TRAP       2       4
5557          RK    3800  0.0030   0.050            TRAP      10       4

5558          KK   D5261
5559          KM        RETRIEVE DIVERTED HYDROGRAPH D5261
5560          DR   D5261
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5561          KK   R5321
5562          KM        ROUTE RETRIEVED HYDROGRAPH D5261 TO C5329
5563          RK    3400  0.0049   0.040            TRAP       2       4
5564          RK    3800  0.0030   0.050            TRAP      10       4

5565          KK   D5311
5566          KM        RETRIEVE DIVERTED HYDROGRAPH D5311
5567          DR   D5311

5568          KK   R5323
5569          KM        ROUTE RETRIEVED HYDROGRAPH D5311 TO C5329
5570          RK    4000  0.0030   0.060            TRAP      10       2

5571          KK   S5326
5572          KM        RUNOFF FROM SUBBASIN S5326
5573          BA   0.901
5574          LS             79
5575          UK     100  0.0049   0.200     100
5576          RK    2000  0.0049   0.040    0.03    TRAP       2       4
5577          RK   16000  0.0030   0.050            TRAP      10       4

5578          KK   C5329
5579          KM        COMBINE FLOWS FROM S5326, R5323, R5321, R5319, AND R5317
5580          HC       5   65.36

5581          KK   R5331
5582          KM        ROUTE FLOWS FROM C5329 TO C5357
5583          RK    4180  0.0003   0.025            TRAP     170       3

5584          KK   D5215
5585          KM        RETRIEVE DIVERTED HYDROGRAPH D5215
5586          DR   D5215

5587          KK   R5333
5588          KM        ROUTE RETRIEVED HYDROGRAPH D5215 TO C5341
5589          RK    2600  0.0045   0.040            TRAP       2       4
5590          RK    5400  0.0047   0.050            TRAP      10       3

5591          KK   S5340
5592          KM        RUNOFF FROM SUBBASIN S5340
5593          BA   0.397
5594          LS             79
5595          UK     700   0.004   0.200     100
5596          RK    2600   0.004   0.040            TRAP       2       4
5597          RK    6000   0.004   0.040            TRAP      10       3

5598          KK   C5341
5599          KM        COMBINE HYDROGRAGH FROM S5340 AND R5333
5600          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

5601          KK   R5343
5602          KM        ROUTE HYDROGRAPH C5341 TO C5357
5603          RK    4000  0.0035   0.040            TRAP      10       3
5604          RK    5200  0.0040   0.050            TRAP      10       4

5605          KK   S5346
5606          KM        RUNOFF FROM SUBBASIN S5346
5607          BA   0.570
5608          LS             79
5609          UK     700   0.002   0.200     100
5610          RK    4100  0.0040   0.040    0.20    TRAP       4       2
5611          RK    3900  0.0043   0.050            TRAP      10       3

5612          KK   R5347
5613          KM        ROUTE HYDROGRAPH S5346 TO C5351
5614          RK    3200  0.0045   0.050            TRAP      10       3     YES

5615          KK   S5350
5616          KM        RUNOFF FROM SUBBASIN S5350
5617          BA   0.448
5618          LS             79
5619          UK     700  0.0020   0.200     100
5620          RK    1700  0.0040   0.040            TRAP       4       2
5621          RK    4600  0.0043   0.040            TRAP      10       3

5622          KK   C5351
5623          KM        COMBINE FLOWS FROM S5350 AND R5347
5624          HC       2

5625          KK   R5353
5626          KM        ROUTE HYDROGRAGH C5351 TO C5357
5627          RK    5200  0.0045   0.050            TRAP      10       3

5628          KK   S5356
5629          KM        RUNOFF FROM SUBBASIN S5356
5630          BA   0.881
5631          LS             79
5632          UK     600  0.0045   0.200     100
5633          RK    4400  0.0035   0.040    0.40    TRAP      10       3
5634          RK    5200  0.0040   0.050            TRAP      10       4

5635          KK   EMF12
5636          KM        COMBINE FLOWS FROM S5356, R5353, R5343, AND R5331
5637          HC       4

5638          KK  DV5358
5639          KM        DIVERT ADDITIONAL CAPACITY ACCROSS EAST MARICOPA COUNTY FLOODWAY
5640          KO       1       2
5641          DT   D5358
5642          DI       0    3000    6000    9000   12000   15000   18000
5643          DQ       0       0       0       0    3000    6000    9000
5644          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

   37       S1004
                V
                V
   43       R1005
                .
                .
   46           .       S1008
                .           .
                .           .
   52       C1009............
                V
                V
   55       R1011
                .
                .
   58           .       S1012
                .           V
                .           V
   64           .       R1013
                .           .
                .           .
   67           .           .       S1016
                .           .           .
                .           .           .
   73           .       C1017............
                .           V
                .           V
   76           .       R1019
                .           .
                .           .
   79       C1021............
                .
                .
   84           .-------->  D1023
   82      DV1023
                .
                .
   87           .       S1024
                .           V
                .           V
   93           .       R1025
                .           .
                .           .
   96           .           .       S1028
                .           .           .
                .           .           .
  102       C1029........................
                .
                .
  107           .-------->  D1031
  105      DV1031
                V
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```
            V
110      R1033
            .
            .
113         .       S1034
            .           .
            .           .
119      C1035............
            .
            .
124         .-------->   D1037
122     DV1037
            V
            V
127      R1039
            .
            .
130         .       S1040
            .           .
            .           .
136      C1041............
            .
            .
141         .-------->   D1043
139     DV1043
            V
            V
144      R1045
            .
            .
147         .       S1046
            .           .
            .           .
153      C1047............
            .
            .
158         .-------->   D1049
156     DV1049
            V
            V
161      R1051
            .
            .
164         .       S1052
            .           .
            .           .
170      C1053............
            .
            .
175         .-------->   D1055
173     DV1055
            .
            .
178         .       S1056
            .           .
            .           .
186         .           .-------->   D1057
184         .      DV1057
            .          V
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                .          V
189             .       R1059
                .          .
                .          .
192             .          .       S1060
                .          .          .
                .          .          .
200             .          .          .-------->   B1061
198             .          .       B1061
                .          .          V
                .          .          V
203             .          .       R1063
                .          .          .
                .          .          .
206             .          .          .      S1064
                .          .          .          .
                .          .          .          .
212             .       C1065.......................
                .          .
                .          .
217             .          .-------->   D1067
215             .      DV1067
                .          V
                .          V
220             .       R1069
                .          .
                .          .
223             .          .       S1070
                .          .          .
                .          .          .
229             .       C1071............
                .          .
                .          .
234             .          .-------->   D1073
232             .      DV1073
                .          V
                .          V
237             .       R1075
                .          .
                .          .
240        C1077............
                .
                .
243             .       S1078
                .          .
                .          .
251             .          .-------->   B1079
249             .       B1079
                .          .
                .          .
254             .          .       S1080
                .          .          V
                .          .          V
260             .          .       R1081
                .          .          .
                .          .          .
263             .          .          .      S1084
                .          .          .          V
                .          .          .          V
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269          .          .          .      R1085
             .          .          .          .
             .          .          .          .
272          .      C1087.......................
             .          V
             .          V
275          .      R1089
             .          .
             .          .
278          .          .      S1090
             .          .          .
             .          .          .
284          .      C1091............
             .          .
             .          .
287          .          .      S1094
             .          .          .
             .          .          .
295          .          .          .------->   D1095
293          .          .     DV1095
             .          .          V
             .          .          V
298          .          .      R1097
             .          .          .
             .          .          .
301          .          .          .      S1098
             .          .          .          .
             .          .          .          .
307          .          .      C1099............
             .          .          .
             .          .          .
312          .          .          .------->   D1101
310          .          .     DV1101
             .          .          V
             .          .          V
315          .          .      R1103
             .          .          .
             .          .          .
318          .          .          .      S1104
             .          .          .          .
             .          .          .          .
324          .          .      C1105............
             .          .          .
             .          .          .
329          .          .          .------->   D1107
327          .          .     DV1107
             .          .          V
             .          .          V
332          .          .      R1109
             .          .          .
             .          .          .
335          .          .          .      S1110
             .          .          .          V
             .          .          .          V
341          .          .          .      R1111
             .          .          .          .
             .          .          .          .
344          .          .          .          .      S1112
             .          .          .          .          .
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            .          .          .          .          .
350         .          .      C1113.......................
            .          .          .
            .          .          .
355         .          .          .-------->   D1115
353         .          .     DV1115
            .          .          V
            .          .          V
358         .          .      R1117
            .          .          .
            .          .          .
361         .          .          .      S1118
            .          .          .          .
            .          .          .          .
367         .          .      C1119............
            .          .          .
            .          .          .
372         .          .          .-------->   D1121
370         .          .     DV1121
            .          .          V
            .          .          V
375         .          .      R1123
            .          .          .
            .          .          .
378         .      C1125............
            .          V
            .          V
381         .      B1127
            .          .
            .          .
387      C1129............
            .
            .
394         .-------->   D1131
391     DV1131
            .
            .
397         .      S1132
            .          V
            .          V
404         .      B1133
            .          .
            .          .
412         .          .-------->   D1135
410         .     DV1135
            .          V
            .          V
415         .      R1137
            .          .
            .          .
418         .          .      S1138
            .          .          .
            .          .          .
424         .      C1139............
            .          .
            .          .
429         .          .-------->   D1141
427         .     DV1141
            .          V
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            .          V
432         .      R1143
            .          .
            .          .
435         .          .      S1144
            .          .          .
            .          .          .
441         .      C1145............
            .          .
            .          .
446         .          .-------->  D1147
444         .     DV1147
            .          .
            .          .
449         .          .      S1148
            .          .          .
            .          .          .
456         .          .          .      S1150
            .          .          .          .
            .          .          .          .
463         .          .      C1151............
            .          .          V
            .          .          V
466         .          .      B1153
            .          .          V
            .          .          V
472         .          .      R1155
            .          .          V
            .          .          V
475         .          .      R1157
            .          .          .
            .          .          .
478         .          .          .      S1158
            .          .          .          .
            .          .          .          .
484         .          .      C1159............
            .          .          .
            .          .          .
489         .          .          .-------->  D1161
487         .          .     DV1161
            .          .          .
            .          .          .
492         .          .          .      S1162
            .          .          .          V
            .          .          .          V
498         .          .          .      R1163
            .          .          .          .
            .          .          .          .
501         .          .          .          .      S1164
            .          .          .          .          .
            .          .          .          .          .
507         .          .          .      C1165............
            .          .          .          .
            .          .          .          .
512         .          .          .          .-------->  D1167
510         .          .          .     DV1167
            .          .          .          .
            .          .          .          .
515         .          .          .          .      S1168
```

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                .         .         .         .         V
                .         .         .         .         V
522             .         .         .         .      R1169
                .         .         .         .         .
                .         .         .         .         .
525             .         .         .         .         .      S1170
                .         .         .         .         .         .
                .         .         .         .         .         .
532             .         .         .         .      C1171............
                .         .         .         .         .
                .         .         .         .         .
537             .         .         .         .         .-------->  B1173
535             .         .         .         .      B1173
                .         .         .         .         V
                .         .         .         .         V
540             .         .         .         .      R1175
                .         .         .         .         V
                .         .         .         .         V
543             .         .         .         .      R1177
                .         .         .         .         .
                .         .         .         .         .
546             .         .         .         .         .      S1178
                .         .         .         .         .         .
                .         .         .         .         .         .
552             .         .         .         .      C1179............
                .         .         .         .         .
                .         .         .         .         .
557             .         .         .         .         .-------->  D1181
555             .         .         .         .     DV1181
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560        C1183.............................................
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563             .      S1184
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571             .         .-------->  D1185
569             .     DV1185
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574             .         .      S1186
                .         .         .
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582             .         .         .-------->  D1187
580             .         .     DV1187
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585             .         .         .      S1190
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593             .         .         .         .-------->  D1191
591             .         .         .     DV1191
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596             .         .         .         .      S1194
                .         .         .         .         V
                .         .         .         .         V
603             .         .         .         .      R1195
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606         .         .         .         .         .      S1198
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612         .         .         .         .      C1199............
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617         .         .         .         .         .-------->  D1201
615         .         .         .         .    DV1201
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620      C1203.............................................
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623         .      S1204
            .         V
            .         V
629         .      R1205
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632         .         .      S1208
            .         .         V
            .         .         V
638         .         .      R1209
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641         .         .         .      S1212
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647         .         .         .      R1213
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650         .         .         .         .      S1216
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657         .      C1217...................................
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660         .         .      S1220
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            .         .         V
666         .         .      R1221
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669         .         .         .      S1224
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676         .         .      C1225............
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681         .         .         .-------->  D1227
679         .         .     DV1227
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            .         .         V
684         .         .      R1229
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687         .      C1231............
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692       .         .-------> D1233
690       .    DV1233
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695       .         .     S1234
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703       .         .        .-------> D1235
701       .         .    DV1235
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706       .         .        .     S1238
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714       .         .        .        .-------> D1239
712       .         .        .    DV1239
          .         .        .        V
          .         .        .        V
717       .         .        .     R1241
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720       .         .        .        .     S1242
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726       .         .        .     C1243............
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731       .         .        .        .-------> D1245
729       .         .        .    DV1245
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734       .         .        .     R1247
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737       .         .        .        .     S1248
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743       .         .        .     C1249............
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748       .         .        .        .-------> D1251
746       .         .        .    DV1251
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751       .         .        .     R1253
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754       .         .        .        .     S1254
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760       .         .        .     C1255............
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765       .         .        .        .-------> D1257
763       .         .        .    DV1257
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768          .          .          .          .      S1258
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774          .          .          .          .          .      S1260
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780          .          .          .          .          .      R1261
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783          .          .          .          .          .          .      S1264
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789          .          .          .          .          .      C1265............
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794          .          .          .          .          .          .-------->   D1267
792          .          .          .          .          .     DV1267
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797          .          .          .          .          .      R1269
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800          .          .          .          .      C1271............
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805          .          .          .          .          .-------->   D1273
803          .          .          .          .     DV1273
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808     C1275.............................................
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811          .      S1276
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819          .          .-------->   D1277
817          .     DV1277
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822          .          .      S1278
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830          .          .          .-------->   D1279
828          .          .     DV1279
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833          .          .          .      S1282
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841          .          .          .          .-------->   D1283
839          .          .          .     DV1283
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844     C1285.................................
             V
             V
847     R2001
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851          .       S2004
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857       C2005............
             V
             V
860       R2007
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863          .       H2008
             .          V
             .          V
887          .       R2009
             .          .
             .          .
890          .          .       S2012
             .          .          .
             .          .          .
896          .       C2013............
             .          V
             .          V
899          .       R2015
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902          .          .       S2016
             .          .          V
             .          .          V
908          .          .       R2017
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913          .          .          .          .<-------   D1283
911          .          .          .      D1283
             .          .          .          V
             .          .          .          V
914          .          .          .      R2019
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917          .          .          .          .       S2022
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923          .          .          .      C2023............
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930          .          .          .          .------->   D2025
926          .          .          .     DV2025
             .          .          .          V
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933          .          .          .      R2027
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936          .          .          .          .       S2028
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942          .       C2029.................................
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947          .          .------->   D2030
945          .      DV2030
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953             .         .          .<-------   D2025
950             .         .      D2025
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954             .         .      R2031
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959             .         .          .          .<-------   D1279
957             .         .          .      D1279
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962             .         .          .          .------->   D2032
960             .         .          .     DV2032
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965             .         .          .      R2033
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968             .         .          .          .      S2034
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974             .         .          .      C2035............
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977             .         .          .      R2036
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980             .         .          .          .      S2037
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986             .      C2038.................................
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991             .         .------->   D2039
989             .      DV2039
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994             .         .      S2040
                .         .          .
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1000            .      C2041............
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                .         .
1005            .         .------->   D2043
1003            .      DV2043
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1010            .         .          .<-------   D2032
1008            .         .      D2032
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1011            .         .      R2047
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1014            .         .          .      S2048
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1020            .         .      C2049............
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1023            .         .      R2051
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1028            .         .         .          .<-------   D1277
1026            .         .         .      D1277
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1029            .         .         .      R2055
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1032            .         .         .          .      S2056
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1038            .         .      C2057.......................
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1041            .         .      R2059
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1044            .         .         .      S2060
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1051            .      C2061.......................
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1056            .         .------->   D2063
1054            .     DV2063
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1059            .         .      S2064
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1065            .         .      R2065
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1070            .         .         .          .<-------   D1267
1068            .         .         .      D1267
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1071            .         .         .      R2067
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1074            .         .         .          .      S2070
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1080            .         .         .      C2071............
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1083            .         .         .      R2073
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1086            .         .         .          .      S2074
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1092            .      C2075.................................
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1097          .          .-------->  D2076
1095          .     DV2076
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1100          .      R2077
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1105          .          .          .<-------   D1273
1103          .          .      D1273
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1106          .          .      R2079
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1109          .          .          .      S2080
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1115          .          .      C2081............
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              .          .          V
1118          .          .      R2083
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1121          .          .          .      S2084
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              .          .          .          V
1127          .          .          .      R2085
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1131          .          .          .          .      S2088
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1137          .          .          .          .      R2089
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1140          .          .          .          .          .      S2092
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1146          .      C2093.............................................
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1151          .          .-------->  D2095
1149          .     DV2095
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1156          .          .          .<-------   D1239
1154          .          .      D1239
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              .          .          V
1157          .          .      R2097
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1162          .          .          .          .<-------   D1245
1160          .          .          .      D1245
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1163          .          .          .      R2099
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1166    .       .       .       .       S2100
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1172    .       .     C2101.......................
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1175    .       .     R2103
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1180    .       .       .       .<-------   D1251
1178    .       .       .     D1251
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1181    .       .       .     R2105
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1185    .       .       .       .       S2106
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1191    .       .       .     C2107............
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1194    .       .       .     R2109
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1197    .       .       .       .       S2110
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1203    .     C2111.................................
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1208    .       .------->   D2112
1206    .    DV2112
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        .       V
1211    .     R2113
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1214    .       .     S2114
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        .       .       V
1220    .       .     R2115
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1225    .       .       .       .<-------   D1257
1223    .       .       .     D1257
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1226    .       .       .     R2117
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1229    .       .       .       .       S2120
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1235    .       .       .     C2121............
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1238    .       .       .     R2123
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1248            .         .         .         .         .      S2128
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1254            .      C2129.............................................
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1259            .         .-------->  D2131
1257            .      DV2131
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1264            .         .         .<-------   D1227
1262            .         .      D1227
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1265            .         .      R2133
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1268            .         .         .      S2136
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1274            .         .      C2137............
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1277            .         .      R2139
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1281            .         .         .      S2140
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1287            .         .         .      R2141
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1291            .         .         .         .      S2144
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1297            .         .         .         .      R2145
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1301            .         .         .         .         .      S2148
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1308            .         .      C2149.................................
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1311            .         .      R2151
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1314            .         .         .      S2154
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1321            .      C2155......................
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1327            .         .-------->  D2157
1324            .      DV2157
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                .          V
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1330            .      R2159
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1333            .          .      S2160
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1340            .      C2161............
                .          V
                .          V
1343            .      B2163
                .          V
                .          V
1349            .      R2165
                .          .
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1354            .          .-------> D2167
1352            .     DV2167
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1359            .          .          .<-------   D1233
1357            .          .      D1233
                .          .          V
                .          .          V
1360            .          .      R2169
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1364            .          .          .      S2170
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1373            .          .          .          .          .<-------   D1235
1371            .          .          .          .      D1235
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1376            .          .          .          .          .-------> D2171
1374            .          .          .          .     DV2171
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                .          .          .          .          V
1379            .          .          .          .      R2173
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1382            .          .          .          .          .      S2174
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1388            .          .          .          .      C2175............
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                .          .          .          .          V
1391            .          .          .          .      R2176
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1396            .          .          .          .          .          .<-------   D2171
1394            .          .          .          .          .      D2171
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1397            .          .          .          .          .      R2177
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1400            .          .          .          .          .          .      S2180
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1406            .         .      C2181.............................................
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1409            .         .      R2183
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1413            .         .         .      S2184
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1419            .         .         .      R2185
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1422            .         .         .         .      S2188
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1428            .      C2189...................................
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1433            .         .-------->   B2191
1431            .      B2191
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                .         V
1436            .      R2193
                .         .
                .         .
1442            .         .-------->   D2195
1440            .     DV2195
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1445            .         .      S2196
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1451            .         .      R2197
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1456            .         .         .      S2200
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1462            .         .         .      R2201
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1468            .         .         .         .      S2202
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1475            .      C2203...................................
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1478            .      B2205
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1484            .      R2207
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1487            .         .      S2210
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1493            .      C2211............
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1498            .          .-------->  D2213
1496            .     DV2213
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1503            .          .          .<-------  D1201
1501            .          .      D1201
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1504            .          .      R2215
                .          .          .
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1509            .          .          .          .<-------  D1191
1507            .          .          .      D1191
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1510            .          .          .      R2217
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1515            .          .          .          .          .<-------  D1187
1513            .          .          .          .      D1187
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1516            .          .          .          .      R2219
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1519            .          .          .          .          .      S2220
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1525            .          .      C2221.................................
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1530            .          .          .-------->  B2223
1528            .          .      B2223
                .          .          V
                .          .          V
1533            .          .      R2225
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1539            .          .          .-------->  D2227
1536            .          .     DV2227
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                .          .          V
1542            .          .      R2231
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1545            .          .          .      S2234
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1553            .          .          .          .          .<-------  D2227
1551            .          .          .          .      D2227
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                .          .          .          .          V
1554            .          .          .          .      R2235
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1558            .          .      C2237......................
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1561            .         .     R2239
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1564            .         .         .     S2240
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                .         .         .         V
1570            .         .         .     R2241
                .         .         .         .
                .         .         .         .
1574            .         .         .         .     S2244
                .         .         .         .         V
                .         .         .         .         V
1580            .         .         .         .     R2245
                .         .         .         .         .
                .         .         .         .         .
1584            .         .         .         .         .     S2248
                .         .         .         .         .         .
                .         .         .         .         .         .
1591            .         .     C2249.................................
                .         .         .
                .         .         .
1594            .         .         .     S2250
                .         .         .         .
                .         .         .         .
1602            .         .         .         .-------> D2251
1600            .         .         .    DV2251
                .         .         .         V
                .         .         .         V
1605            .         .         .     R2253
                .         .         .         .
                .         .         .         .
1608            .         .         .         .     S2254
                .         .         .         .         .
                .         .         .         .         .
1614            .     C2255.................................
                .         .
                .         .
1619            .         .-------> D2257
1617            .    DV2257
                .         V
                .         V
1622            .     R2259
                .         .
                .         .
1625            .         .     S2260
                .         .         .
                .         .         .
1633            .         .         .         .<------- D1185
1631            .         .         .     D1185
                .         .         .         V
                .         .         .         V
1634            .         .         .     R2261
                .         .         .         .
                .         .         .         .
1637            .         .         .         .     S2264
                .         .         .         .         .
                .         .         .         .         .
1643            .         .         .     C2265............
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                .         .         .         V
                .         .         .         V
1646            .         .         .      R2267
                .         .         .         .
                .         .         .         .
1649            .         .         .         .      S2268
                .         .         .         .         .
                .         .         .         .         .
1655            .         .         .      C2269............
                .         .         .         V
                .         .         .         V
1658            .         .         .      R2271
                .         .         .         .
                .         .         .         .
1661            .         .         .         .      S2274
                .         .         .         .         V
                .         .         .         .         V
1667            .         .         .         .      R2275
                .         .         .         .         .
                .         .         .         .         .
1670            .      C2277.................................
                .         .
                .         .
1675            .         .         .<-------   D1181
1673            .         .      D1181
                .         .         V
                .         .         V
1676            .         .      R2279
                .         .         .
                .         .         .
1681            .         .         .         .<-------   D1167
1679            .         .         .      D1167
                .         .         .         V
                .         .         .         V
1682            .         .         .      R2281
                .         .         .         .
                .         .         .         .
1685            .         .         .         .      S2284
                .         .         .         .         .
                .         .         .         .         .
1691            .         .         .         .         .      S2286
                .         .         .         .         .         .
                .         .         .         .         .         .
1697            .         .      C2287.................................
                .         .         V
                .         .         V
1700            .         .      R2289
                .         .         .
                .         .         .
1703            .         .         .      S2290
                .         .         .         .
                .         .         .         .
1709            .      C2291......................
                .         .
                .         .
1714            .         .------->   D2293
1712            .      DV2293
                .         V
                .         V
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1717        .      R2295
            .        .
            .        .
1722        .        .          .<-------   D1161
1720        .        .      D1161
            .        .          V
            .        .          V
1723        .        .      R2299
            .        .          V
            .        .          V
1726        .        .      R2301
            .        .          .
            .        .          .
1730        .        .          .      S2304
            .        .          .          .
            .        .          .          .
1740        .        .          .          .-------->   D2305
1737        .        .          .     DV2305
            .        .          .          V
            .        .          .          V
1743        .        .          .      R2307
            .        .          .          .
            .        .          .          .
1747        .        .          .          .      S2310
            .        .          .          .          V
            .        .          .          .          V
1753        .        .          .          .      R2311
            .        .          .          .          .
            .        .          .          .          .
1756        .        .          .          .          .      S2312
            .        .          .          .          .          V
            .        .          .          .          .          V
1763        .        .          .          .          .      B2313
            .        .          .          .          .          .
            .        .          .          .          .          .
1769        .      C2315.............................................
            .        .
            .        .
1774        .        .-------->   D2317
1772        .     DV2317
            .        V
            .        V
1777        .      R2319
            .        .
            .        .
1782        .        .          .<-------   D2305
1780        .        .      D2305
            .        .          V
            .        .          V
1783        .        .      R2321
            .        .          .
            .        .          .
1787        .        .          .      S2324
            .        .          .          .
            .        .          .          .
1794        .      C2325......................
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            .        .
1799        .        .-------->   D2327
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1797        .     DV2327
            .        .
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1802        .        .     S2330
            .        .        V
            .        .        V
1808        .        .     R2331
            .        .        .
            .        .        .
1814        .        .        .          .<-------   D1135
1812        .        .        .     D1135
            .        .        .          V
            .        .        .          V
1815        .        .        .     R2333
            .        .        .          .
            .        .        .          .
1820        .        .        .          .          .<-------   D1141
1818        .        .        .          .     D1141
            .        .        .          .          .
            .        .        .          .          .
1821        .        .        .     C2335............
            .        .        .          V
            .        .        .          V
1824        .        .        .     R2337
            .        .        .          .
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1827        .        .        .          .     S2340
            .        .        .          .          .
            .        .        .          .          .
1834        .        .        .     C2341............
            .        .        .          V
            .        .        .          V
1837        .        .        .     R2343
            .        .        .          .
            .        .        .          .
1841        .        .        .          .     S2346
            .        .        .          .          .
            .        .        .          .          .
1848        .     C2349.................................
            .        V
            .        V
1851        .     R2351
            .        .
            .        .
1856        .        .        .<-------   D1147
1854        .        .     D1147
            .        .        V
            .        .        V
1857        .        .     R2353
            .        .        V
            .        .        V
1860        .        .     R2355
            .        .        .
            .        .        .
1863        .        .        .     S2358
            .        .        .          V
            .        .        .          V
1869        .        .        .     R2359
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1874   .   .   .   .   .<-------   D1095
1872   .   .   .   .  D1095
       .   .   .   .     V
       .   .   .   .     V
1875   .   .   .   .  R2361
       .   .   .   .     .
       .   .   .   .     .
1878   .   .   .   .     .      S2364
       .   .   .   .     .         .
       .   .   .   .     .         .
1884   .   .   .   .  C2365............
       .   .   .   .     V
       .   .   .   .     V
1887   .   .   .   .  R2367
       .   .   .   .     .
       .   .   .   .     .
1892   .   .   .   .     .         .<-------   D1101
1890   .   .   .   .     .      D1101
       .   .   .   .     .         V
       .   .   .   .     .         V
1893   .   .   .   .     .      R2369
       .   .   .   .     .         .
       .   .   .   .     .         .
1896   .   .   .   .     .         .      S2370
       .   .   .   .     .         .         .
       .   .   .   .     .         .         .
1902   .   .   .   .     .      C2371............
       .   .   .   .     .         .
       .   .   .   .     .         .
1907   .   .   .   .     .         .------->   D2373
1905   .   .   .   .     .     DV2373
       .   .   .   .     .         V
       .   .   .   .     .         V
1910   .   .   .   .     .      R2375
       .   .   .   .     .         .
       .   .   .   .     .         .
1913   .   .   .   .     .         .      S2376
       .   .   .   .     .         .         .
       .   .   .   .     .         .         .
1919   .   .   C2377.............................................
       .   .      V
       .   .      V
1922   .   .   R2379
       .   .      .
       .   .      .
1925   .   .      .   S2380
       .   .      .      V
       .   .      .      V
1932   .   .      .   B2381
       .   .      .      .
       .   .      .      .
1938   .   C2383........................
       .   .
       .   .
1943   .   .------->   D2385
1941   .  DV2385
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1948        .         .         .<-------   D1107
1946        .         .     D1107
            .         .         V
            .         .         V
1949        .         .     R2387
            .         .         .
            .         .         .
1954        .         .         .          .<-------   D2373
1952        .         .         .     D2373
            .         .         .         V
            .         .         .         V
1955        .         .         .     R2389
            .         .         .         .
            .         .         .         .
1958        .         .         .         .      S2390
            .         .         .         .          .
            .         .         .         .          .
1964        .         .     C2391.......................
            .         .         V
            .         .         V
1967        .         .     R2393
            .         .         .
            .         .         .
1971        .         .         .     S2396
            .         .         .         V
            .         .         .         V
1977        .         .         .     R2397
            .         .         .         .
            .         .         .         .
1980        .         .         .         .      S2400
            .         .         .         .          .
            .         .         .         .          .
1986        .     C2401.................................
            .         .
            .         .
1991        .         .------->   D2403
1989        .    DV2403
            .         .
            .         .
1996        .         .         .<-------   D1115
1994        .         .     D1115
            .         .         V
            .         .         V
1997        .         .     R2405
            .         .         .
            .         .         .
2002        .         .         .          .<-------   D1121
2000        .         .         .     D1121
            .         .         .         V
            .         .         .         V
2003        .         .         .     R2407
            .         .         .         .
            .         .         .         .
2006        .         .         .         .      S2410
            .         .         .         .          .
            .         .         .         .          .
2012        .         .     C2411.......................
            .         .         V
            .         .         V
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2015          .           .       R2413
              .           .           .
              .           .           .
2018          .           .           .       S2416
              .           .           .           .
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2024      C2417.................................
              .
              .
2029          .-------->  D2419
2027     DV2419
              .
              .
2034          .           .<-------   D1023
2032          .       D1023
              .           .
              .           .
2035          .           .       S3002
              .           .           .
              .           .           .
2042      C3003......................
              V
              V
2045      R3005
              .
              .
2048          .       S3008
              .           .
              .           .
2054      C3009............
              V
              V
2057      R3011
              .
              .
2060          .       S3012
              .           V
              .           V
2066          .       R3013
              .           .
              .           .
2070          .           .       S3016
              .           .           V
              .           .           V
2076          .           .       R3017
              .           .           .
              .           .           .
2079          .           .           .       S3020
              .           .           .           V
              .           .           .           V
2086          .           .           .       B3021
              .           .           .           .
              .           .           .           .
2091      C3023.................................
              V
              V
2094      R3025
              .
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2099          .           .<-------   D1031
2097          .       D1031
              .           V
              .           V
2100          .       R3027
              .           .
              .           .
2103          .           .       S3028
              .           .           V
              .           .           V
2109          .           .       B3029
              .           .           .
              .           .           .
2114          .       C3031............
              .           .
              .           .
2119          .           .------->   D3033
2117          .      DV3033
              .           V
              .           V
2122          .       R3035
              .           .
              .           .
2125          .           .       S3038
              .           .           V
              .           .           V
2131          .           .       B3039
              .           .           .
              .           .           .
2136       C3041........................
              V
              V
2139       R3043
              .
              .
2144          .           .<-------   D3033
2142          .       D3033
              .           V
              .           V
2145          .       R3045
              .           .
              .           .
2151          .           .           .<-------   D1037
2149          .           .       D1037
              .           .           V
              .           .           V
2152          .           .       R3047
              .           .           .
              .           .           .
2158          .           .           .           .<-------   D1043
2156          .           .           .       D1043
              .           .           .           V
              .           .           .           V
2159          .           .           .       R3049
              .           .           .           .
              .           .           .           .
2163       C3051....................................
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2168          .          .<-------   D1049
2166          .      D1049
              .          V
              .          V
2169          .      R3053
              .          .
              .          .
2175          .          .          .<-------   D1055
2173          .          .      D1055
              .          .          V
              .          .          V
2176          .          .      R3055
              .          .          .
              .          .          .
2180          .          .          .      S3060
              .          .          .          .
              .          .          .          .
2187      C3061.................................
              .
              .
2192          .------->   D3063
2190     DV3063
             V
             V
2195      R3065
              .
              .
2199          .      S3066
              .          V
              .          V
2205          .      B3067
              .          .
              .          .
2212          .          .------->   D3069
2210          .     DV3069
              .          V
              .          V
2215          .      R3071
              .          .
              .          .
2218          .          .      S3074
              .          .          V
              .          .          V
2225          .          .      B3075
              .          .          .
              .          .          .
2230      C3077......................
              .
              .
2235          .          .<-------   D3063
2233          .      D3063
              .          V
              .          V
2236          .      R3079
              .          .
              .          .
2241          .          .------->   D3081
2239          .     DV3081
              .          V
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                .          V
2244            .       R3083
                .          .
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2247            .          .       S3084
                .          .          .
                .          .          .
2253            .       C3085............
                .          .
                .          .
2258            .          .-------->   D3087
2256            .      DV3087
                .          V
                .          V
2261            .       R3089
                .          .
                .          .
2264        C3091............
                .
                .
2269            .-------->   D3093
2267       DV3093
                V
                V
2272        R3095
                .
                .
2277            .          .<-------   D3069
2275            .       D3069
                .          V
                .          V
2278            .       R3097
                .          .
                .          .
2281            .          .       S3100
                .          .          V
                .          .          V
2288            .          .       B3101
                .          .          .
                .          .          .
2293            .        EMF2............
                .          V
                .          V
2296            .       R3105
                .          .
                .          .
2299            .          .       S3200
                .          .          V
                .          .          V
2305            .          .       B3201
                .          .          .
                .          .          .
2310        C3203........................
                V
                V
2313        R3205
                .
                .
2318            .          .<-------   D1057
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2316    .     D1057
        .        V
        .        V
2319    .     R3207
        .        .
        .        .
2322    .        .     S3210
        .        .        .
        .        .        .
2331    .        .        .-------->  B3211
2329    .        .     B3211
        .        .        .
        .        .        .
2334    .     C3213............
        .        .
        .        .
2339    .        .        .<--------  D1067
2337    .        .     D1067
        .        .        V
        .        .        V
2340    .        .     R3215
        .        .        .
        .        .        .
2346    .        .        .          .<--------  D1073
2344    .        .        .      D1073
        .        .        .          V
        .        .        .          V
2347    .        .        .      R3217
        .        .        .          .
        .        .        .          .
2352    .        .        .          .          .<--------  D1131
2350    .        .        .          .      D1131
        .        .        .          .          V
        .        .        .          .          V
2353    .        .        .          .      R3219
        .        .        .          .          .
        .        .        .          .          .
2356    .        .        .          .          .      S3220
        .        .        .          .          .          .
        .        .        .          .          .          .
2363    .        .     C3221.................................
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        .        .        .
2368    .        .        .-------->  D3223
2366    .        .    DV3223
        .        .        V
        .        .        V
2371    .        .     R3225
        .        .        .
        .        .        .
2374    .     C3227............
        .        .
        .        .
2379    .        .-------->  D3229
2377    .    DV3229
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        .        .
2384    .        .        .<--------  D3081
2382    .        .     D3081
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              .          .          V
              .          .          V
2385          .          .       R3231
              .          .          .
              .          .          .
2390          .          .          .-------->   D3233
2388          .          .      DV3233
              .          .          .
              .          .          .
2395          .          .          .          .<-------   D3087
2393          .          .          .      D3087
              .          .          .          V
              .          .          .          V
2396          .          .          .      R3235
              .          .          .          .
              .          .          .          .
2399          .          .          .          .      S3240
              .          .          .          .          .
              .          .          .          .          .
2405          .      C3241.................................
              .          V
              .          V
2408          .      R3243
              .          .
              .          .
2413          .          .          .<-------   D3093
2411          .          .       D3093
              .          .          V
              .          .          V
2414          .          .       R3247
              .          .          .
              .          .          .
2417          .          .          .      S3250
              .          .          .          .
              .          .          .          .
2424          .      C3251......................
              .          .
              .          .
2429          .          .-------->   D3253
2427          .     DV3253
              .          V
              .          V
2432          .      R3255
              .          .
              .          .
2435          .          .       S3260
              .          .          .
              .          .          .
2442       EMF3......................
              V
              V
2445       R3263
              .
              .
2450          .          .<-------   D3229
2448          .      D3229
              .          .
              .          .
2453          .          .          .<-------   D3233
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2451          .           .       D3233
              .           .           .
              .           .           .
2454          .       C3265............
              .           V
              .           V
2457          .       R3267
              .           .
              .           .
2461          .           .       S3270
              .           .           .
              .           .           .
2468          .       C3271............
              .           V
              .           V
2471          .       R3273
              .           .
              .           .
2476          .           .           .<-------   D3253
2474          .           .       D3253
              .           .           V
              .           .           V
2477          .           .       R3275
              .           .           .
              .           .           .
2480          .           .           .       S3280
              .           .           .           .
              .           .           .           .
2487          .       C3281........................
              .           .
              .           .
2490          .           .       S3284
              .           .           .
              .           .           .
2497       EMF4........................
              .
              .
2500          .       S3288
              .           .
              .           .
2506       C3289............
              V
              V
2509       R3291
              .
              .
2512          .       S3294
              .           V
              .           V
2518          .       R3295
              .           .
              .           .
2523          .           .           .<-------   D2419
2521          .           .       D2419
              .           .           V
              .           .           V
2524          .           .       R3297
              .           .           .
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2527        .         .         .      S3300
            .         .         .          .
            .         .         .          .
2533        .     C3301.......................
            .         V
            .         V
2536        .     R3303
            .         .
            .         .
2541        .         .         .<-------   D3223
2539        .         .     D3223
            .         .         V
            .         .         V
2542        .         .     R3305
            .         .         .
            .         .         .
2545        .         .         .      S3310
            .         .         .          .
            .         .         .          .
2552        .         .     C3311............
            .         .         V
            .         .         V
2555        .         .     R3313
            .         .         .
            .         .         .
2558        .         .         .      S3316
            .         .         .          .
            .         .         .          .
2565        .     C3317.......................
            .         V
            .         V
2568        .     R3319
            .         .
            .         .
2571        .         .     S3320
            .         .         .
            .         .         .
2578        .     C3321............
            .         V
            .         V
2581        .     R3323
            .         .
            .         .
2584        .         .     S3326
            .         .         .
            .         .         .
2593        .         .         .------->   D3327
2591        .         .    DV3327
            .         .         V
            .         .         V
2596        .         .     R3328
            .         .         .
            .         .         .
2599        .         .         .      S3330
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2605        .     C3331.......................
            .         V
            .         V
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2608          .       R3333
              .          .
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2613          .          .          .<-------   D3327
2611          .          .      D3327
              .          .          V
              .          .          V
2614          .          .      R3335
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2618          .          .          .      S3340
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              .          .          .          .
2625          .       C3341........................
              .          V
              .          V
2628          .       R3343
              .          .
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2631          .          .      S3346
              .          .          .
              .          .          .
2638       EMF5........................
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              .
2643          .------->   D3349
2641      DV3349
              .
              .
2648          .          .<-------   D2030
2646          .       D2030
              .          .
              .          .
2651          .          .------->   D4001
2649          .      DV4001
              .          V
              .          V
2654          .       R4003
              .          .
              .          .
2657          .          .      S4004
              .          .          .
              .          .          .
2663          .       C4005............
              .          .
              .          .
2668          .          .------->   D4007
2666          .      DV4007
              .          V
              .          V
2671          .       R4009
              .          .
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2674          .          .      S4010
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2680          .       C4011............
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2685          .          .-------->  D4013
2683          .     DV4013
              .          V
              .          V
2688          .      R4015
              .          .
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2694          .          .          .<-------   D4013
2692          .          .      D4013
              .          .          V
              .          .          V
2695          .          .      R4017
              .          .          .
              .          .          .
2698          .          .          .      S4020
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2704          .      C4021.......................
              .          V
              .          V
2707          .      R4023
              .          .
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2710          .          .      S4024
              .          .          .
              .          .          .
2716          .      C4025............
              .          V
              .          V
2719          .      R4027
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2722          .          .      S4028
              .          .          V
              .          .          V
2728          .          .      R4029
              .          .          .
              .          .          .
2731          .          .          .      S4030
              .          .          .          V
              .          .          .          V
2737          .          .          .      R4031
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2740          .          .          .          .      S4034
              .          .          .          .          .
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2747          .      C4035.................................
              .          .
              .          .
2752          .          .-------->  D4037
2750          .     DV4037
              .          .
              .          .
2755          .          .      S4040
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2764          .          .          .-------->  D4041
2762          .          .     DV4041
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                .         .         .
2769            .         .         .         .<-------   D4001
2767            .         .         .     D4001
                .         .         .         V
                .         .         .         V
2770            .         .         .     R4043
                .         .         .         .
                .         .         .         .
2773            .         .         .         .       S4044
                .         .         .         .           .
                .         .         .         .           .
2779            .         .         .     C4045............
                .         .         .         V
                .         .         .         V
2782            .         .         .     R4047
                .         .         .         .
                .         .         .         .
2787            .         .         .         .           .<-------   D2039
2785            .         .         .         .       D2039
                .         .         .         .           V
                .         .         .         .           V
2788            .         .         .         .       R4049
                .         .         .         .           .
                .         .         .         .           .
2791            .         .         .         .           .       S4050
                .         .         .         .           .           .
                .         .         .         .           .           .
2797            .         .         .         .       C4051............
                .         .         .         .           V
                .         .         .         .           V
2800            .         .         .         .       R4053
                .         .         .         .           .
                .         .         .         .           .
2805            .         .         .         .           .           .<-------   D2043
2803            .         .         .         .           .       D2043
                .         .         .         .           .           V
                .         .         .         .           .           V
2806            .         .         .         .           .       R4055
                .         .         .         .           .           .
                .         .         .         .           .           .
2811            .         .         .         .           .           .           .<-------   D2063
2809            .         .         .         .           .           .       D2063
                .         .         .         .           .           .           V
                .         .         .         .           .           .           V
2812            .         .         .         .           .           .       R4057
                .         .         .         .           .           .           .
                .         .         .         .           .           .           .
2815            .         .         .         .           .           .           .       S4060
                .         .         .         .           .           .           .           .
                .         .         .         .           .           .           .           .
2821            .         .         .     C4061.............................................
                .         .         .         .
                .         .         .         .
2826            .         .         .         .           .<-------   D2076
2824            .         .         .         .       D2076
                .         .         .         .           V
                .         .         .         .           V
2827            .         .         .         .       R4063
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2830            .         .         .   C4065............
                .         .         .       V
                .         .         .       V
2833            .         .         .   R4067
                .         .         .       .
                .         .         .       .
2836            .         .         .       .     S4068
                .         .         .       .         V
                .         .         .       .         V
2842            .         .         .       .     R4069
                .         .         .       .         .
                .         .         .       .         .
2847            .         .         .       .         .         .<-------   D2095
2845            .         .         .       .         .     D2095
                .         .         .       .         .         V
                .         .         .       .         .         V
2848            .         .         .       .         .     R4071
                .         .         .       .         .         .
                .         .         .       .         .         .
2851            .         .         .       .         .         .       S4074
                .         .         .       .         .         .         .
                .         .         .       .         .         .         .
2857            .         .         .       .         .     C4075............
                .         .         .       .         .         .
                .         .         .       .         .         .
2862            .         .         .       .         .         .-------->  D4077
2860            .         .         .       .         .    DV4077
                .         .         .       .         .         V
                .         .         .       .         .         V
2865            .         .         .       .         .     R4079
                .         .         .       .         .         .
                .         .         .       .         .         .
2868            .         .         .       .         .         .       S4080
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                .         .         .       .         .         .         .
2874            .         .         .   C4081.................................
                .         .         .       .
                .         .         .       .
2879            .         .         .       .-------->  D4083
2877            .         .         .  DV4083
                .         .         .       V
                .         .         .       V
2882            .         .         .   R4085
                .         .         .       .
                .         .         .       .
2887            .         .         .       .-------->  D4087
2885            .         .         .  DV4087
                .         .         .       V
                .         .         .       V
2890            .         .         .   R4089
                .         .         .       .
                .         .         .       .
2893            .         .         .       .     S4090
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2899            .         .         .   C4091............
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2902            .         .         .      B4093
                .         .         .         V
                .         .         .         V
2908            .         .         .      R4095
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                .         .         .         .
2911            .         .         .         .      S4100
                .         .         .         .         .
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2918            .         .         .         .         .     S4102
                .         .         .         .         .         .
                .         .         .         .         .         .
2923            .         .         .      C4103.......................
                .         .         .         V
                .         .         .         V
2926            .         .         .      B4105
                .         .         .         .
                .         .         .         .
2935            .         .         .         .-------> D4107
2933            .         .         .     DV4107
                .         .         .         .
                .         .         .         .
2938            .         .         .         .      S4110
                .         .         .         .         .
                .         .         .         .         .
2945            .      C4111.................................
                .         .
                .         .
2950            .         .-------> D4113
2948            .     DV4113
                .         .
                .         .
2953            .         .      S4114
                .         .         .
                .         .         .
2962            .         .         .         .<------- D4077
2960            .         .         .     D4077
                .         .         .         V
                .         .         .         V
2963            .         .         .     R4115
                .         .         .         .
                .         .         .         .
2966            .         .      C4117............
                .         .         V
                .         .         V
2969            .         .      R4119
                .         .         .
                .         .         .
2972            .         .         .     S4120
                .         .         .         V
                .         .         .         V
2979            .         .         .     R4121
                .         .         .         .
                .         .         .         .
2984            .         .         .         .         .<------- D4087
2982            .         .         .         .      D4087
                .         .         .         .         V
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2985    .       .       .       .       R4123
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2988    .       .       .       .         .       S4126
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        .       .       .       .         .         .
2995    .       .     C4127.................................
        .       .       V
        .       .       V
2998    .       .     B4129
        .       .       V
        .       .       V
3004    .       .     R4131
        .       .       .
        .       .       .
3007    .       .       .     S4132
        .       .       .       .
        .       .       .       .
3015    .       .       .       .         .<-------   D2112
3013    .       .       .       .       D2112
        .       .       .       .         .
        .       .       .       .         .
3018    .       .       .       .         .------->   D4133
3016    .       .       .       .      DV4133
        .       .       .       .          V
        .       .       .       .          V
3021    .       .       .       .       R4135
        .       .       .       .         .
        .       .       .       .         .
3026    .       .       .       .         .------->   D4137
3024    .       .       .       .      DV4137
        .       .       .       .          V
        .       .       .       .          V
3029    .       .       .       .       R4139
        .       .       .       .         .
        .       .       .       .         .
3032    .       .       .     C4141............
        .       .       .       V
        .       .       .       V
3035    .       .       .     R4143
        .       .       .       .
        .       .       .       .
3040    .       .       .       .         .<-------   D4133
3038    .       .       .       .       D4133
        .       .       .       .          V
        .       .       .       .          V
3041    .       .       .       .       R4145
        .       .       .       .         .
        .       .       .       .         .
3046    .       .       .       .         .         .<-------   D2131
3044    .       .       .       .         .       D2131
        .       .       .       .         .          V
        .       .       .       .         .          V
3047    .       .       .       .         .       R4147
        .       .       .       .         .         .
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3050    .       .       .       .         .         .       S4150
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3057    .       .       .       .       C4151.......................
        .       .       .       .           .
        .       .       .       .           .
3062    .       .       .       .           .-------> D4153
3060    .       .       .       .       DV4153
        .       .       .       .           V
        .       .       .       .           V
3065    .       .       .       .       R4155
        .       .       .       .           .
        .       .       .       .           .
3068    .       .       .       .           .       S4156
        .       .       .       .           .           .
        .       .       .       .           .           .
3076    .       .       .       .           .           .           .<-------   D4137
3074    .       .       .       .           .           .       D4137
        .       .       .       .           .           .           V
        .       .       .       .           .           .           V
3077    .       .       .       .           .           .       R4158
        .       .       .       .           .           .           .
        .       .       .       .           .           .           .
3080    .       .       .   C4159.................................
        .       .       .       .
        .       .       .       .
3085    .       .       .       .-------> D4161
3083    .       .       .   DV4161
        .       .       .       V
        .       .       .       V
3088    .       .       .   R4163
        .       .       .       .
        .       .       .       .
3091    .       .       .       .       S4166
        .       .       .       .           .
        .       .       .       .           .
3098    .       .       .   C4167............
        .       .       .       V
        .       .       .       V
3101    .       .       .   B4169
        .       .       .       V
        .       .       .       V
3107    .       .       .   R4171
        .       .       .       .
        .       .       .       .
3112    .       .       .       .           .<-------   D4153
3110    .       .       .       .       D4153
        .       .       .       .           V
        .       .       .       .           V
3113    .       .       .       .       R4173
        .       .       .       .           .
        .       .       .       .           .
3119    .       .       .       .           .           .<-------   D4161
3117    .       .       .       .           .       D4161
        .       .       .       .           .           V
        .       .       .       .           .           V
3120    .       .       .       .           .       R4175
        .       .       .       .           .           .
        .       .       .       .           .           .
3123    .       .       .       .           .           .       S4178
        .       .       .       .           .           .           .
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3130    .       .       .       .       C4179.......................
        .       .       .       .           V
        .       .       .       .           V
3133    .       .       .       .       B4181
        .       .       .       .           V
        .       .       .       .           V
3139    .       .       .       .       R4183
        .       .       .       .           .
        .       .       .       .           .
3142    .   C4185.................................
        .       .
        .       .
3146    .       .   S4186
        .       .       .
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3151    .   C4187............
        .       V
        .       V
3154    .   B4189
        .       V
        .       V
3162    .   R4191
        .       .
        .       .
3165    .       .   S4194
        .       .       .
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3172    .       .       .   S4196
        .       .       .       .
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3178    .   C4197........................
        .       .
        .       .
3183    .       .------->   D4199
3181    .  DV4199
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        .       .
3186    .       .   S4200
        .       .       .
        .       .       .
3193    .       .       .   S4202
        .       .       .       .
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3199    .   C4203........................
        .       V
        .       V
3202    .   R4205
        .       .
        .       .
3207    .       .       .<-------   D2157
3205    .       .   D2157
        .       .       V
        .       .       V
3208    .       .   R4207
        .       .       .
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3211    .       .       .   S4210
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3217        .         .      C4211............
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            .         .         .
3222        .         .         .-------->  B4213
3220        .         .      B4213
            .         .         V
            .         .         V
3225        .         .      R4215
            .         .         .
            .         .         .
3229        .         .         .      S4216
            .         .         .          .
            .         .         .          .
3235        .         .      C4217............
            .         .         V
            .         .         V
3238        .         .      R4219
            .         .         .
            .         .         .
3241        .         .         .      S4220
            .         .         .          .
            .         .         .          .
3247        .      C4221........................
            .         V
            .         V
3250        .      R4223
            .         .
            .         .
3253        .         .      S4224
            .         .         V
            .         .         V
3259        .         .      R4225
            .         .         .
            .         .         .
3263        .         .         .      S4226
            .         .         .          .
            .         .         .          .
3272        .         .         .          .          .<-------   D2167
3270        .         .         .          .      D2167
            .         .         .          .          .
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3275        .         .         .          .          .-------->  D4227
3273        .         .         .          .      B4227
            .         .         .          .          V
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3278        .         .         .          .      R4229
            .         .         .          .          .
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3282        .         .         .          .          .      S4230
            .         .         .          .          .          .
            .         .         .          .          .          .
3290        .         .         .          .          .          .          .<-------   D2195
3288        .         .         .          .          .          .      D2195
            .         .         .          .          .          .          V
            .         .         .          .          .          .          V
3291        .         .         .          .          .          .      R4231
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3296        .         .         .          .          .          .          .          .<-------   D2213
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3294    .       .       .       .       .       .       .   D2213
        .       .       .       .       .       .       .      V
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3297    .       .       .       .       .       .       .   R4233
        .       .       .       .       .       .       .      .
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3300    .       .       .       .       .       .       .      .       S4236
        .       .       .       .       .       .       .      .         .
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3306    .       .       .       .       .       .   C4237.......................
        .       .       .       .       .       .       .
        .       .       .       .       .       .       .
3311    .       .       .       .       .       .       .-------->  D4239
3309    .       .       .       .       .       .  DV4239
        .       .       .       .       .       .       V
        .       .       .       .       .       .       V
3314    .       .       .       .       .       .   R4241
        .       .       .       .       .       .       .
        .       .       .       .       .       .       .
3317    .       .       .       .       .       .       .   S4244
        .       .       .       .       .       .       .      .
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3323    .       .       .       .       .       .   C4245............
        .       .       .       .       .       .       .
        .       .       .       .       .       .       .
3328    .       .       .       .       .       .       .-------->  D4247
3326    .       .       .       .       .       .  DV4247
        .       .       .       .       .       .       V
        .       .       .       .       .       .       V
3331    .       .       .       .       .       .   R4249
        .       .       .       .       .       .       .
        .       .       .       .       .       .       .
3334    .       .       .       .   C4251.......................
        .       .       .       .       V
        .       .       .       .       V
3337    .       .       .       .   R4253
        .       .       .       .       .
        .       .       .       .       .
3340    .   C4255.................................
        .       .
        .       .
3345    .       .           .<-------   D4239
3343    .       .       D4239
        .       .           .
        .       .           .
3346    .       .           .       S4256
        .       .           .           .
        .       .           .           .
3353    .       .       C4257............
        .       .           V
        .       .           V
3356    .       .       R4259
        .       .           .
        .       .           .
3360    .       .           .       S4260
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3366    .       .           .           .   S4262
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                .         .         .         .         .
3374            .         .         .         .         .-------->  D4263
3372            .         .         .         .     DV4263
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3377            .         .         .         .     R4265
                .         .         .         .         .
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3382            .         .         .         .         .-------->  D4267
3380            .         .         .         .     DV4267
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3387            .         .         .         .         .         .<-------   D4247
3385            .         .         .         .         .     D4247
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3388            .         .         .         .         .     R4269
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3392            .         .         .         .         .         .     S4270
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3399            .         .         .         .         .     C4271............
                .         .         .         .         .         .
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3402            .         .     C4273.................................
                .         .         V
                .         .         V
3405            .         .     R4275
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                .         .         .
3410            .         .         .         .<-------   D2251
3408            .         .         .     D2251
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                .         .         .         V
3411            .         .         .     R4277
                .         .         .         .
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3416            .         .         .         .         .<-------   D2257
3414            .         .         .         .     D2257
                .         .         .         .         V
                .         .         .         .         V
3417            .         .         .         .     R4279
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3420            .         .         .         .         .     S4280
                .         .         .         .         .         .
                .         .         .         .         .         .
3427            .         .         .     C4281......................
                .         .         .         V
                .         .         .         V
3430            .         .         .     R4283
                .         .         .         .
                .         .         .         .
3435            .         .         .         .-------->  D4285
3433            .         .         .     DV4285
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3438            .         .         .         .     S4288
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3447            .         .         .         .         .          .<-------   D4263
3445            .         .         .         .         .      D4263
                .         .         .         .         .          V
                .         .         .         .         .          V
3448            .         .         .         .         .      R4289
                .         .         .         .         .          .
                .         .         .         .         .          .
3451            .         .         .      C4291.......................
                .         .         .         .
                .         .         .         .
3456            .         .         .         .-------->   D4293
3454            .         .         .     DV4293
                .         .         .         V
                .         .         .         V
3459            .         .         .      R4295
                .         .         .         .
                .         .         .         .
3462            .         .         .         .      S4296
                .         .         .         .         .
                .         .         .         .         .
3469            .         .         .      C4297............
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                .         .         .         .
3474            .         .         .         .-------->   D4299
3472            .         .         .     DV4299
                .         .         .         V
                .         .         .         V
3477            .         .         .      R4301
                .         .         .         .
                .         .         .         .
3482            .         .         .         .         .<-------   D4267
3480            .         .         .         .      D4267
                .         .         .         .         V
                .         .         .         .         V
3483            .         .         .         .      R4303
                .         .         .         .         .
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3486            .         .         .         .         .      S4304
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                .         .         .         .         .          .
3493            .         .         .      C4305.......................
                .         .         .         V
                .         .         .         V
3496            .         .         .      R4307
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3499            .         .         .         .      S4310
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3505            .      C4311.................................
                .         V
                .         V
3508            .      B4313
                .         V
                .         V
3516            .      R4315
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3521            .         .          .<-------   D4299
3519            .         .      D4299
                .         .          V
                .         .          V
3522            .         .      R4317
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3525            .         .          .      S4320
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3531            .         .      C4321............
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                .         .          V
3534            .         .      R4323
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3537            .         .          .      S4324
                .         .          .          .
                .         .          .          .
3543            .      C4325........................
                .         V
                .         V
3546            .      R4327
                .         .
                .         .
3549            .         .      S4330
                .         .          .
                .         .          .
3557            .         .          .------->   D4331
3555            .         .     DV4331
                .         .          V
                .         .          V
3560            .         .      R4333
                .         .          .
                .         .          .
3565            .         .          .          .<-------   D4331
3563            .         .          .      D4331
                .         .          .          V
                .         .          .          V
3566            .         .          .      R4335
                .         .          .          .
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3569            .         .          .          .      S4338
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3575            .         .          .      C4339............
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3580            .         .          .          .------->   D4341
3578            .         .          .     DV4341
                .         .          .          V
                .         .          .          V
3583            .         .          .      R4343
                .         .          .          .
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3588            .         .          .          .          .<-------   D4341
3586            .         .          .          .      D4341
                .         .          .          .          V
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3589             .         .         .         .      R4345
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3592             .         .         .         .         .      S4347
                 .         .         .         .         .         .
                 .         .         .         .         .         .
3600             .         .         .         .         .         .          .<-------   D4285
3598             .         .         .         .         .         .      D4285
                 .         .         .         .         .         .         V
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3601             .         .         .         .         .         .      R4349
                 .         .         .         .         .         .         .
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3606             .         .         .         .         .         .         .          .<-------   D4293
3604             .         .         .         .         .         .         .      D4293
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3607             .         .         .         .         .         .         .      R4351
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3610             .         .         .         .         .      C4353.......................
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3613             .         .         .         .         .      R4355
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3616             .         .         .         .         .         .      S4356
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3622             .         .         .         .      C4357.......................
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3627             .         .         .         .         .-------->   D4359
3625             .         .         .         .     DV4359
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                 .         .         .         .         V
3630             .         .         .         .      R4361
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3633             .         .         .         .         .      S4364
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3642             .         .         .         .         .         .-------->   D4365
3640             .         .         .         .         .      DV4365
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3645             .         .         .         .         .      R4367
                 .         .         .         .         .         .
                 .         .         .         .         .         .
3650             .         .         .         .         .         .          .<-------   D2293
3648             .         .         .         .         .         .      D2293
                 .         .         .         .         .         .         V
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3651             .         .         .         .         .         .      R4369
                 .         .         .         .         .         .         .
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3657             .         .         .         .         .         .         .          .<-------   D2317
3655             .         .         .         .         .         .         .      D2317
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                .         .         .         .         .         .         .         V
3658            .         .         .         .         .         .         .      R4371
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3662            .         .         .         .         .         .      C4373............
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3667            .         .         .         .         .         .         .         .<-------   D2327
3665            .         .         .         .         .         .         .      D2327
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3668            .         .         .         .         .         .         .      R4375
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3671            .         .         .         .         .         .         .         .      S4376
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3678            .         .         .         .         .      C4377.................................
                .         .         .         .         .         V
                .         .         .         .         .         V
3681            .         .         .         .         .      R4379
                .         .         .         .         .         .
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3686            .         .         .         .         .         .         .<-------   D4365
3684            .         .         .         .         .         .      D4365
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3687            .         .         .         .         .         .      R4381
                .         .         .         .         .         .         .
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3692            .         .         .         .         .         .         .         .<-------   D4359
3690            .         .         .         .         .         .         .      D4359
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3693            .         .         .         .         .         .         .         .      S4384
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3700            .         .         .         .         .      C4385.................................
                .         .         .         .         .         .
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3706            .         .         .         .         .         .------->   D4387
3703            .         .         .         .         .     DV4387
                .         .         .         .         .         V
                .         .         .         .         .         V
3709            .         .         .         .         .      R4389
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3712            .         .      C4391.................................
                .         .         V
                .         .         V
3715            .         .      R4393
                .         .         .
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3718            .         .         .      S4394
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3725            .      C4395.......................
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3728            .      R4397
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3731            .         .      S4400
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3740            .         .         .          .<-------   D4387
3738            .         .         .      D4387
                .         .         .          V
                .         .         .          V
3741            .         .         .      R4401
                .         .         .          .
                .         .         .          .
3745            .         .      C4403............
                .         .         V
                .         .         V
3748            .         .      R4405
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3752            .         .         .      S4406
                .         .         .          .
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3759            .      C4407........................
                .         .
                .         .
3764            .         .------->   D4409
3762            .     DV4409
                .         .
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3767            .         .      S4410
                .         .         V
                .         .         V
3773            .         .      B4411
                .         .         V
                .         .         V
3779            .         .      R4413
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3782            .         .         .      S4414
                .         .         .          V
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3788            .         .         .      B4415
                .         .         .          V
                .         .         .          V
3794            .         .         .      R4417
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3797            .         .         .          .      S4420
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3804            .         .      C4421........................
                .         .         V
                .         .         V
3807            .         .      B4423
                .         .         .
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3815            .         .         .          .<-------   D2385
3813            .         .         .      D2385
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3816            .         .         .      R4425
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3819            .         .      C4427............
                .         .         V
                .         .         V
3822            .         .      R4429
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3825            .         .         .      S4430
                .         .         .         .
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3831            .         .      C4431............
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3836            .         .         .-------->   D4433
3834            .         .     DV4433
                .         .         V
                .         .         V
3839            .         .      R4435
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3842            .         .         .      S4440
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3849            .         .      C4441............
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3852            .         .      R4443
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3855            .         .         .      S4446
                .         .         .         .
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3862            .      C4447........................
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                .         .
3867            .         .-------->   D4449
3865            .     DV4449
                .         V
                .         V
3870            .      R4451
                .         .
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3875            .         .         .<-------   D4433
3873            .         .     D4433
                .         .         V
                .         .         V
3876            .         .     R4453
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                .         .         .
3879            .         .         .      S4454
                .         .         .         .
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3886            .         .     C4455............
                .         .         V
                .         .         V
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3889    .       .     R4457
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3892    .       .       .     S4460
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3899    .     C4461.......................
        .       V
        .       V
3902    .     R4463
        .       .
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3907    .       .       .<-------  D2403
3905    .       .     D2403
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        .       .       .
3908    .       .       .     S4466
        .       .       .       V
        .       .       .       V
3914    .       .       .     B4467
        .       .       .       .
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3920    .       .       .       .     S4470
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        .       .       .       .       .
3926    .       .     C4471......................
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        .       .       V
3929    .       .     R4473
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3932    .       .       .     S4474
        .       .       .       V
        .       .       .       V
3938    .       .       .     B4475
        .       .       .       .
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3944    .       .     C4477............
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3947    .       .     R4479
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3950    .       .       .     S4480
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        .       .       .       V
3956    .       .       .     R4481
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3959    .       .       .       .     S4484
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3965    .       .       .       .       .     S4486
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3971    .       .     C4487.................................
        .       .       V
        .       .       V
3974    .       .     R4489
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3977            .          .          .       S4490
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3984            .          .      C4491............
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                .          .          .
3989            .          .          .-------->   D4493
3987            .          .     DV4493
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3992            .      C4495............
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3995            .      R4497
                .          .
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3998            .          .      S4500
                .          .          V
                .          .          V
4004            .          .      R4501
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4007            .          .          .       S4504
                .          .          .          .
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4014            .          .      C4505............
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                .          .          .
4019            .          .          .-------->   D4507
4017            .          .     DV4507
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4022            .          .          .       H4510
                .          .          .          .
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4031            .          .      C4511............
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4034            .          .      R4513
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4039            .          .          .          .<-------   D3349
4037            .          .          .       D3349
                .          .          .          V
                .          .          .          V
4040            .          .          .       R4515
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4043            .          .       EMF6............
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                .          .          .
4048            .          .          .-------->   D4519
4046            .          .     DV4519
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4053            .          .          .          .<-------   D4507
4051            .          .          .       D4507
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                                    V
                                    V
4054                              R4521
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4058                                  .      S4524
                                      .        V
                                      .        V
4065                                  .      B4525
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4070                                  .        .      S4526
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4077                    C4527.........................................
                          V
                          V
4080                    R4529
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4083                      .      S4530
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4092                      .        .        .<-------   D4519
4090                      .        .      D4519
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                          .        .        V
4093                      .        .      R4531
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4096                      .        .
                EMF7.................................
                  V
                  V
4099            R4533
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4102                .      S4534
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4108            C4535............
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4113                .        .<-------   D4041
4111                .      D4041
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                    .        V
4114                .      R4536
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4119                .        .------->   D4537
4117                .      DV4537
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4122                .      R4538
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4125                .        .      S4539
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4131    .     C4540............
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4136    .        .-------->  D4541
4134    .   DV4541
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4139    .        .      S4544
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4147    .        .         .-------->  D4545
4145    .        .    DV4545
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4150    .        .         .      S4548
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4156    .     C4549......................
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4159    .     R4551
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4162    .        .      S4554
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4168    .     C4555............
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        .        .
4173    .        .-------->  D4557
4171    .   DV4557
        .        .
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4178    .        .         .<-------  D4113
4176    .        .      D4113
        .        .         V
        .        .         V
4179    .        .      R4559
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4184    .        .         .         .<-------  D4037
4182    .        .         .      D4037
        .        .         .         V
        .        .         .         V
4185    .        .         .      R4561
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        .        .         .         .
4188    .        .         .         .      S4566
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4195    .        .         .         .         .      S4568
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4202    .        .      C4569.................................
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4205    .        .         .      S4570
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4214   .        .        .        .        .<-------  D4537
4212   .        .        .        .     D4537
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4215   .        .        .        .     R4573
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4218   .        .        .     C4575............
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4223   .        .        .        .        .<-------  D4541
4221   .        .        .        .     D4541
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4224   .        .        .        .     R4577
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4229   .        .        .        .        .        .<-------  D4545
4227   .        .        .        .        .     D4545
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4230   .        .        .        .        .     R4579
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4233   .        .        .        .        .        .     S4580
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4239   .        .        .        .     C4581......................
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4242   .     C4583...................................
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4247   .        .-------> D4585
4245   .     DV4585
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4250   .        .     S4588
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4258   .        .        .-------> D4589
4256   .        .     DV4589
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4261   .        .        .     S4590
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4269   .        .        .        .-------> D4591
4267   .        .        .     DV4591
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4274   .        .        .        .        .<-------  D4557
4272   .        .        .        .     D4557
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       .        .        .        .        V
4275   .        .        .        .     R4593
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4278   .        .        .        .        .     S4596
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4286      .         .         .         .         .         .-------->  D4597
4284      .         .         .         .         .     DV4597
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4289      .      C4599.............................................
          .         .
          .         .
4294      .         .-------->  D4601
4292      .     DV4601
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4297      .         .      S4604
          .         .         V
          .         .         V
4303      .         .      R4605
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4308      .         .         .         .<-------  D4585
4306      .         .         .      D4585
          .         .         .         V
          .         .         .         V
4309      .         .         .      R4607
          .         .         .         .
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4312      .         .         .         .      S4610
          .         .         .         .         .
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4320      .         .         .         .         .         .<-------  D4597
4318      .         .         .         .         .     D4597
          .         .         .         .         .         .
          .         .         .         .         .         .
4321      .      C4611.............................................
          .         .
          .         .
4326      .         .-------->  D4613
4324      .     DV4613
          .         .
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4329      .         .       4614
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          .         .         .
4337      .         .         .-------->  D4615
4335      .         .     DV4615
          .         .         V
          .         .         V
4340      .         .      R4616
          .         .         .
          .         .         .
4343      .         .         .      S4618
          .         .         .         .
          .         .         .         .
4349      .         .      C4619............
          .         .         .
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4354      .         .         .-------->  D4620
4352      .         .     DV4620
          .         .         V
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                .         .         V
4357            .         .      R4621
                .         .         .
                .         .         .
4360            .         .         .      S4622
                .         .         .          .
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4366            .         .      C4623............
                .         .         .
                .         .         .
4371            .         .         .-------->  D4624
4369            .         .      DV4624
                .         .         V
                .         .         V
4374            .         .      R4625
                .         .         .
                .         .         .
4377            .         .         .      S4626
                .         .         .          .
                .         .         .          .
4383            .         .      C4627............
                .         .         .
                .         .         .
4388            .         .         .-------->  D4628
4386            .         .      DV4628
                .         .         V
                .         .         V
4391            .         .      R4629
                .         .         .
                .         .         .
4394            .         .         .      S4630
                .         .         .          .
                .         .         .          .
4402            .         .         .          .          .<-------  D4107
4400            .         .         .          .      D4107
                .         .         .          .          V
                .         .         .          .          V
4403            .         .         .          .      R4631
                .         .         .          .          .
                .         .         .          .          .
4406            .         .      C4632........................
                .         .         .
                .         .         .
4411            .         .         .-------->  D4634
4409            .         .      DV4634
                .         .         V
                .         .         V
4414            .         .      R4635
                .         .         .
                .         .         .
4419            .         .         .          .<-------  D4615
4417            .         .         .      D4615
                .         .         .          V
                .         .         .          V
4420            .         .         .      R4636
                .         .         .          .
                .         .         .          .
4425            .         .         .          .          .<-------  D4620
4423            .         .         .          .      D4620
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                .         .         .         .         V
                .         .         .         .         V
4426            .         .         .         .      R4638
                .         .         .         .         .
                .         .         .         .         .
4431            .         .         .         .         .         .<-------   D4624
4429            .         .         .         .         .      D4624
                .         .         .         .         .         V
                .         .         .         .         .         V
4432            .         .         .         .         .      R4640
                .         .         .         .         .         .
                .         .         .         .         .         .
4437            .         .         .         .         .         .         .<-------   D4628
4435            .         .         .         .         .         .      D4628
                .         .         .         .         .         .         V
                .         .         .         .         .         .         V
4438            .         .         .         .         .         .      R4642
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
4441            .         .         .      C4643.....................................
                .         .         .         .
                .         .         .         .
4444            .         .         .         .      S4644
                .         .         .         .         .
                .         .         .         .         .
4450            .      C4645.....................................
                .         .
                .         .
4455            .         .-------->   D4647
4453            .      DV4647
                .         .
                .         .
4458            .         .      S4650
                .         .         .
                .         .         .
4466            .         .         .-------->   D4651
4464            .         .      DV4651
                .         .         .
                .         .         .
4471            .         .         .         .<-------   D4634
4469            .         .         .      D4634
                .         .         .         V
                .         .         .         V
4472            .         .         .      R4652
                .         .         .         .
                .         .         .         .
4475            .         .         .         .      S4654
                .         .         .         .         .
                .         .         .         .         .
4481            .         .      C4655.......................
                .         .         .
                .         .         .
4486            .         .         .-------->   D4656
4484            .         .      DV4656
                .         .         V
                .         .         V
4489            .         .      R4657
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4494    .       .       .       .<-------   D4199
4492    .       .       .   D4199
        .       .       .       V
        .       .       .       V
4495    .       .       .   R4658
        .       .       .       .
        .       .       .       .
4498    .       .       .       .       S4660
        .       .       .       .           .
        .       .       .       .           .
4504    .       .   C4661.......................
        .       .       V
        .       .       V
4507    .       .   R4663
        .       .       .
        .       .       .
4512    .       .       .       .<-------   D4656
4510    .       .       .   D4656
        .       .       .       V
        .       .       .       V
4513    .       .       .   R4664
        .       .       .       .
        .       .       .       .
4516    .       .       .       .       S4666
        .       .       .       .           .
        .       .       .       .           .
4522    .   C4667.................................
        .       .
        .       .
4527    .       .------->   D4669
4525    .   DV4669
        .       .
        .       .
4530    .       .   S4670
        .       .       .
        .       .       .
4538    .       .       .------->   D4671
4536    .       .   DV4671
        .       .       .
        .       .       .
4541    .       .       .   S4674
        .       .       .       .
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4547    .   C4675......................
        .       .
        .       .
4552    .       .------->   D4677
4550    .   DV4677
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        .       .
4555    .       .   S4680
        .       .       V
        .       .       V
4561    .       .   R4681
        .       .       .
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4564    .       .       .   S4684
        .       .       .       V
        .       .       .       V
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4570    .       .       .       R4685
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4573    .       .       .           .       S4688
        .       .       .           .           V
        .       .       .           .           V
4579    .       .       .           .       R4689
        .       .       .           .           .
        .       .       .           .           .
4582    .       .       .           .           .       S4690
        .       .       .           .           .           .
        .       .       .           .           .           .
4588    .     C4691.....................................
        .       .
        .       .
4593    .       .------->   D4693
4591    .     DV4693
        .       .
        .       .
4596    .       .     S4696
        .       .         V
        .       .         V
4602    .       .     R4697
        .       .         .
        .       .         .
4605    .       .       .       S4700
        .       .       .           .
        .       .       .           .
4611    .       .     C4701............
        .       .         V
        .       .         V
4614    .       .     R4703
        .       .         .
        .       .         .
4617    .       .       .       S4706
        .       .       .           .
        .       .       .           .
4625    .       .       .           .           .<-------   D4409
4623    .       .       .           .       D4409
        .       .       .           .           V
        .       .       .           .           V
4626    .       .       .           .       R4707
        .       .       .           .           .
        .       .       .           .           .
4629    .       .     C4709........................
        .       .         .
        .       .         .
4634    .       .         .------->   D4711
4632    .       .     DV4711
        .       .         .
        .       .         .
4637    .       .       .       S4714
        .       .       .           V
        .       .       .           V
4643    .       .       .       R4715
        .       .       .           .
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4647    .       .       .           .       S4718
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4653            .         .      C4719.......................
                .         .         V
                .         .         V
4656            .         .      R4721
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                .         .         .
4660            .         .         .      S4722
                .         .         .         .
                .         .         .         .
4666            .         .         .         .      S4726
                .         .         .         .         .
                .         .         .         .         .
4673            .         .      C4727.......................
                .         .         V
                .         .         V
4676            .         .      R4729
                .         .         .
                .         .         .
4680            .         .         .      S4730
                .         .         .         .
                .         .         .         .
4687            .         .      C4731............
                .         .         V
                .         .         V
4690            .         .      R4733
                .         .         .
                .         .         .
4694         EMF8.......................
                V
                V
4697         R4737
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                .
4700            .      S4740
                .         .
                .         .
4706         C4741............
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4709            .      S4744
                .         .
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4717            .         .-------->   D4745
4715            .     DV4745
                .         V
                .         V
4720            .      R4747
                .         .
                .         .
4723            .         .      S4750
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4729            .      C4751............
                .         V
                .         V
4732            .      R4753
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4735          .          .       S4756
              .          .          .
              .          .          .
4741          .      C4757............
              .          V
              .          V
4744          .      R4759
              .          .
              .          .
4747          .          .       S4760
              .          .          .
              .          .          .
4753          .      C4761............
              .          V
              .          V
4756          .      R4763
              .          .
              .          .
4759          .          .       S4766
              .          .          .
              .          .          .
4765          .      C4767............
              .          V
              .          V
4768          .      R4769
              .          .
              .          .
4771          .          .       S4770
              .          .          .
              .          .          .
4777          .      C4771............
              .          V
              .          V
4780          .      R4773
              .          .
              .          .
4783          .          .       S4776
              .          .          .
              .          .          .
4791          .          .          .          .<-------   D4711
4789          .          .          .      D4711
              .          .          .          V
              .          .          .          V
4792          .          .          .      R4777
              .          .          .          V
              .          .          .          V
4795          .          .          .      R4779
              .          .          .          V
              .          .          .          V
4798          .          .          .      R4781
              .          .          .          .
              .          .          .          .
4801          .      C4783........................
              .          .
              .          .
4807          .          .------->   D4785
4805          .     DV4785
              .          V
              .          V
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4810          .       R4787
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4813          .          .       S4790
              .          .          .
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4820          .       C4791............
              .          .
              .          .
4823        EMF9............
              V
              V
4826       R4797
              .
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4831          .          .<-------   D4589
4829          .       D4589
              .          V
              .          V
4832          .       R5001
              .          .
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4835          .          .       S5004
              .          .          .
              .          .          .
4841          .       C5005............
              .          V
              .          V
4844          .       R5007
              .          .
              .          .
4847          .          .       S5010
              .          .          V
              .          .          V
4853          .          .       R5011
              .          .          .
              .          .          .
4856          .          .          .       S5014
              .          .          .          V
              .          .          .          V
4862          .          .          .       R5015
              .          .          .          .
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4865          .          .          .          .       S5020
              .          .          .          .          .
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4871          .       C5021.................................
              .          V
              .          V
4874          .       R5023
              .          .
              .          .
4879          .          .          .<-------   D4591
4877          .          .       D4591
              .          .          V
              .          .          V
4880          .          .       R5025
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4883    .       .       .       S5030
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4889    .       .   C5031............
        .       .       V
        .       .       V
4892    .       .   R5033
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        .       .       .
4895    .       .       .       S5038
        .       .       .           .
        .       .       .           .
4902    .   C5039........................
        .       V
        .       V
4905    .   R5041
        .       .
        .       .
4910    .       .       .<-------   D4601
4908    .       .   D4601
        .       .       V
        .       .       V
4911    .       .   R5043
        .       .       .
        .       .       .
4914    .       .       .       S5046
        .       .       .           .
        .       .       .           .
4920    .       .   C5047............
        .       .       V
        .       .       V
4923    .       .   R5049
        .       .       .
        .       .       .
4926    .       .       .       S5050
        .       .       .           .
        .       .       .           .
4932    .       .   C5051............
        .       .       V
        .       .       V
4935    .       .   R5053
        .       .       .
        .       .       .
4940    .       .       .           .<-------   D4613
4938    .       .       .       D4613
        .       .       .           V
        .       .       .           V
4941    .       .       .       R5055
        .       .       .           .
        .       .       .           .
4944    .       .       .           .       S5060
        .       .       .           .           .
        .       .       .           .           .
4950    .       .       .       C5061............
        .       .       .           V
        .       .       .           V
4953    .       .       .       R5063
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4956        .         .         .         .      S5066
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4962        .     C5067.................................
            .         V
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4965        .     R5069
            .         .
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4968        .         .     S5070
            .         .         .
            .         .         .
4975        .     C5071............
            .         V
            .         V
4978        .     R5073
            .         .
            .         .
4981        .         .     S5080
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            .         .         .
4989        .         .         .-------->  D5081
4987        .         .    DV5081
            .         .         .
            .         .         .
4992        .     C5083............
            .         .
            .         .
4997        .         .-------->  D5085
4995        .    DV5085
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            .         .
5002        .         .         .<-------   D4677
5000        .         .     D4677
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            .         .         .
5005        .         .         .-------->  D5087
5003        .         .    DV5087
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5008        .         .     R5089
            .         .         .
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5011        .         .         .      S5090
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5017        .         .     C5091............
            .         .         .
            .         .         .
5022        .         .         .-------->  D5093
5020        .         .    DV5093
            .         .         V
            .         .         V
5025        .         .     R5095
            .         .         .
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5028        .         .         .      S5100
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5034          .           .       C5101............
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              .           .           .
5039          .           .           .-------->   D5103
5037          .           .      DV5103
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              .           .           .
5044          .           .           .           .<-------   D4647
5042          .           .           .       D4647
              .           .           .           V
              .           .           .           V
5045          .           .           .       R5105
              .           .           .           .
              .           .           .           .
5050          .           .           .           .           .<-------   D4651
5048          .           .           .           .       D4651
              .           .           .           .           V
              .           .           .           .           V
5051          .           .           .           .       R5107
              .           .           .           .           .
              .           .           .           .           .
5056          .           .           .           .           .           .<-------   D4669
5054          .           .           .           .           .       D4669
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              .           .           .           .           .           V
5057          .           .           .           .           .       R5109
              .           .           .           .           .           .
              .           .           .           .           .           .
5062          .           .           .           .           .           .           .<-------   D4671
5060          .           .           .           .           .           .       D4671
              .           .           .           .           .           .           V
              .           .           .           .           .           .           V
5063          .           .           .           .           .           .       R5111
              .           .           .           .           .           .           .
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5066          .           .           .           .           .           .           .       S5114
              .           .           .           .           .           .           .           .
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5072          .           .           .       C5115.........................................
              .           .           .           .
              .           .           .           .
5077          .           .           .           .-------->   D5117
5075          .           .           .       DV5117
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              .           .           .           V
5080          .           .           .       R5119
              .           .           .           .
              .           .           .           .
5085          .           .           .           .           .<-------   D5081
5083          .           .           .           .       D5081
              .           .           .           .           .
              .           .           .           .           .
5086          .       C5121...............................
              .           V
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5089          .       R5123
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5092          .           .       S5126
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5098            .     C5127............
                .         V
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5101            .     R5129
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5106            .         .         .<-------   D5087
5104            .         .     D5087
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5107            .         .     R5131
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                .         .         .
5112            .         .         .         .<-------   D4693
5110            .         .         .     D4693
                .         .         .         V
                .         .         .         V
5113            .         .         .     R5133
                .         .         .         .
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5118            .         .         .         .         .<-------   D4745
5116            .         .         .         .     D4745
                .         .         .         .         V
                .         .         .         .         V
5119            .         .         .         .     R5135
                .         .         .         .         .
                .         .         .         .         .
5124            .         .         .         .         .         .<-------   D5093
5122            .         .         .         .         .     D5093
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                .         .         .         .         .         V
5125            .         .         .         .         .     R5137
                .         .         .         .         .         .
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5128            .         .         .         .         .         .     S5138
                .         .         .         .         .         .         .
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5134            .         .     C5139.............................................
                .         .         .
                .         .         .
5139            .         .         .-------->  D5141
5137            .         .     DV5141
                .         .         V
                .         .         V
5142            .         .     R5143
                .         .         .
                .         .         .
5145            .         .         .     S5146
                .         .         .         .
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5154            .         .         .         .         .<-------   D5103
5152            .         .         .         .     D5103
                .         .         .         .         V
                .         .         .         .         V
5155            .         .         .         .     R5149
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5160    .       .       .       .       .       .<-------   D5117
5158    .       .       .       .       .   D5117
        .       .       .       .       .       V
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5161    .       .       .       .       .   R5151
        .       .       .       .       .       .
        .       .       .       .       .       .
5164    .       .   C5153.................................
        .       .       .
        .       .       .
5169    .       .       .------->   D5155
5167    .       .   DV5155
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        .       .       V
5172    .       .   R5157
        .       .       .
        .       .       .
5175    .   C5159............
        .       .
        .       .
5180    .       .------->   D5161
5178    .   DV5161
        .       V
        .       V
5183    .   R5163
        .       .
        .       .
5186    .       .   S5170
        .       .       .
        .       .       .
5192    .   C5173............
        .       .
        .       .
5197    .       .------->   D5175
5195    .   DV5175
        .       V
        .       V
5200    .   R5177
        .       .
        .       .
5205    .       .       .<-------   D5085
5203    .       .   D5085
        .       .       .
        .       .       .
5208    .       .       .------->   D5179
5206    .       .   DV5179
        .       .       V
        .       .       V
5211    .       .   R5181
        .       .       .
        .       .       .
5216    .       .       .------->   D5183
5214    .       .   DV5183
        .       .       V
        .       .       V
5219    .       .   R5185
        .       .       .
        .       .       .
5224    .       .       .------->   D5187
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5222          .          .      DV5187
              .          .          V
              .          .          V
5227          .          .       R5189
              .          .          .
              .          .          .
5232          .          .          .-------->   D5191
5230          .          .      DV5191
              .          .          V
              .          .          V
5235          .          .       R5193
              .          .          .
              .          .          .
5240          .          .          .-------->   D5195
5238          .          .      DV5195
              .          .          V
              .          .          V
5243          .          .       R5197
              .          .          .
              .          .          .
5248          .          .          .-------->   D5199
5246          .          .      DV5199
              .          .          V
              .          .          V
5251          .          .       R5201
              .          .          .
              .          .          .
5256          .          .          .-------->   D5203
5254          .          .      DV5203
              .          .          .
              .          .          .
5259          .          .          .       S5204
              .          .          .           .
              .          .          .           .
5266          .          .       C5205............
              .          .          .
              .          .          .
5271          .          .          .-------->   D5206
5269          .          .      DV5206
              .          .          V
              .          .          V
5274          .          .       R5207
              .          .          .
              .          .          .
5279          .          .          .-------->   D5209
5277          .          .      DV5209
              .          .          .
              .          .          .
5282          .          .          .       S5210
              .          .          .           .
              .          .          .           .
5289          .          .       C5213............
              .          .          .
              .          .          .
5294          .          .          .-------->   D5215
5292          .          .      DV5215
              .          .          .
              .          .          .
5299          .          .          .           .<-------   D5179
```

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5297        .         .         .     D5179
            .         .         .        V
            .         .         .        V
5300        .         .         .     R5217
            .         .         .        .
            .         .         .        .
5305        .         .         .        .          .<-------   D5183
5303        .         .         .        .     D5183
            .         .         .        .        V
            .         .         .        .        V
5306        .         .         .        .     R5219
            .         .         .        .        .
            .         .         .        .        .
5311        .         .         .        .        .          .<-------   D5187
5309        .         .         .        .        .     D5187
            .         .         .        .        .        V
            .         .         .        .        .        V
5312        .         .         .        .        .     R5221
            .         .         .        .        .        .
            .         .         .        .        .        .
5317        .         .         .        .        .        .          .<-------   D5191
5315        .         .         .        .        .        .     D5191
            .         .         .        .        .        .        V
            .         .         .        .        .        .        V
5318        .         .         .        .        .        .     R5223
            .         .         .        .        .        .        .
            .         .         .        .        .        .        .
5323        .         .         .        .        .        .        .          .<-------   D5195
5321        .         .         .        .        .        .        .     D5195
            .         .         .        .        .        .        .        V
            .         .         .        .        .        .        .        V
5324        .         .         .        .        .        .        .     R5225
            .         .         .        .        .        .        .        .
            .         .         .        .        .        .        .        .
5327        .         .         .     C5227.............................................
            .         .         .        .
            .         .         .        .
5330        .         .         .        .     S5230
            .         .         .        .        .
            .         .         .        .        .
5337        .         .      C5233.......................
            .         .         .
            .         .         .
5342        .         .         .-------->   D5235
5340        .         .      DV5235
            .         .         .
            .         .         .
5347        .         .         .        .<-------   D5199
5345        .         .         .     D5199
            .         .         .        V
            .         .         .        V
5348        .         .         .     R5237
            .         .         .        .
            .         .         .        .
5353        .         .         .        .          .<-------   D5203
5351        .         .         .        .     D5203
            .         .         .        .        V
            .         .         .        .        V
5354        .         .         .        .     R5239
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                .         .         .         .         .
                .         .         .         .         .
5359            .         .         .         .         .         .<-------   D5206
5357            .         .         .         .         .     D5206
                .         .         .         .         .         V
                .         .         .         .         .         V
5360            .         .         .         .         .     R5241
                .         .         .         .         .         .
                .         .         .         .         .         .
5365            .         .         .         .         .         .         .<-------   D5209
5363            .         .         .         .         .         .     D5209
                .         .         .         .         .         .         V
                .         .         .         .         .         .         V
5366            .         .         .         .         .         .     R5243
                .         .         .         .         .         .         .
                .         .         .         .         .         .         .
5369            .         .         .     C5245.................................
                .         .         .         V
                .         .         .         V
5372            .         .         .     R5247
                .         .         .         .
                .         .         .         .
5375            .         .     C5249............
                .         .         .
                .         .         .
5380            .         .         .------->   D5251
5378            .         .     DV5251
                .         .         V
                .         .         V
5383            .         .     R5253
                .         .         .
                .         .         .
5388            .         .         .         .<-------   D5235
5386            .         .         .     D5235
                .         .         .         V
                .         .         .         V
5389            .         .         .     R5255
                .         .         .         .
                .         .         .         .
5392            .         .         .         .     S5258
                .         .         .         .         .
                .         .         .         .         .
5398            .     C5259.................................
                .         .
                .         .
5403            .         .------->   D5261
5401            .     DV5261
                .         .
                .         .
5408            .         .------->   D5263
5406            .     DV5263
                .         .
                .         .
5413            .         .         .<-------   D5155
5411            .         .     D5155
                .         .         .
                .         .         .
5414            .         .         .     S5266
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                .         .         .         .
5420            .         .     C5269............
                .         .         .
                .         .         .
5425            .         .         .-------> D5271
5423            .         .     DV5271
                .         .         .
                .         .         .
5430            .         .         .         .<-------  D5141
5428            .         .         .     D5141
                .         .         .         V
                .         .         .         V
5431            .         .         .     R5273
                .         .         .         .
                .         .         .         .
5434            .         .         .         .      S5276
                .         .         .         .          .
                .         .         .         .          .
5440            .         .         .     C5277............
                .         .         .         .
                .         .         .         .
5445            .         .         .         .-------> D5279
5443            .         .         .     D5279
                .         .         .         .
                .         .         .         .
5450            .         .         .         .          .<-------  D4785
5448            .         .         .         .      D4785
                .         .         .         .          V
                .         .         .         .          V
5451            .         .         .         .      R5281
                .         .         .         .          .
                .         .         .         .          .
5454            .         .         .         .          .      S5284
                .         .         .         .          .          .
                .         .         .         .          .          .
5461            .         .         .         .      C5285............
                .         .         .         .          .
                .         .         .         .          .
5466            .         .         .         .          .-------> D5287
5464            .         .         .         .     DV5287
                .         .         .         .          V
                .         .         .         .          V
5469            .         .         .         .      R5289
                .         .         .         .          .
                .         .         .         .          .
5472            .         .         .         .          .      S5290
                .         .         .         .          .          .
                .         .         .         .          .          .
5479            .     C5291.............................................
                .         .
                .         .
5482        EMF10............
                V
                V
5485        R5295
                .
                .
5490            .         .<-------  D5263
5488            .     D5263
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                .          V
                .          V
5491            .       R5297
                .          .
                .          .
5496            .          .          .<-------   D5175
5494            .          .       D5175
                .          .          .
                .          .          .
5499            .          .          .          .<-------   D5161
5497            .          .          .       D5161
                .          .          .          .
                .          .          .          .
5500            .          .       C5299............
                .          .          V
                .          .          V
5503            .          .       R5301
                .          .          .
                .          .          .
5508            .          .          .          .<-------   D5271
5506            .          .          .       D5271
                .          .          .          V
                .          .          .          V
5509            .          .          .       R5303
                .          .          .          .
                .          .          .          .
5514            .          .          .          .          .<-------   D5279
5512            .          .          .          .       D5279
                .          .          .          .          .
                .          .          .          .          .
5517            .          .          .          .          .          .<-------   D5287
5515            .          .          .          .          .       D5287
                .          .          .          .          .          .
                .          .          .          .          .          .
5518            .          .          .          .       C5305............
                .          .          .          .          V
                .          .          .          .          V
5521            .          .          .          .       R5307
                .          .          .          .          .
                .          .          .          .          .
5524            .          .          .          .          .       S5308
                .          .          .          .          .          .
                .          .          .          .          .          .
5530            .       C5309.............................................
                .          .
                .          .
5535            .          .------->   D5311
5533            .      DV5311
                .          .
                .          .
5538            .          .       S5314
                .          .          .
                .          .          .
5545        EMF11........................
                V
                V
5548        R5317
                .
                .
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5553          .          .<-------   D5251
5551          .      D5251
              .          V
              .          V
5554          .      R5319
              .          .
              .          .
5560          .          .          .<-------   D5261
5558          .          .      D5261
              .          .          V
              .          .          V
5561          .          .      R5321
              .          .          .
              .          .          .
5567          .          .          .          .<-------   D5311
5565          .          .          .      D5311
              .          .          .          V
              .          .          .          V
5568          .          .          .      R5323
              .          .          .          .
              .          .          .          .
5571          .          .          .          .      S5326
              .          .          .          .          .
              .          .          .          .          .
5578      C5329.............................................
              V
              V
5581      R5331
              .
              .
5586          .          .<-------   D5215
5584          .      D5215
              .          V
              .          V
5587          .      R5333
              .          .
              .          .
5591          .          .      S5340
              .          .          .
              .          .          .
5598          .      C5341............
              .          V
              .          V
5601          .      R5343
              .          .
              .          .
5605          .          .      S5346
              .          .          V
              .          .          V
5612          .          .      R5347
              .          .          .
              .          .          .
5615          .          .          .      S5350
              .          .          .          .
              .          .          .          .
5622          .          .      C5351............
              .          .          V
              .          .          V
5625          .          .      R5353
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                .         .         .
                .         .         .
5628            .         .         .       S5356
                .         .         .          .
                .         .         .          .
5635        EMF12.................................
                .
                .
5641            .-------->   D5358
5638       DV5358
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(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1   ****************************************                    ****************************************
    *                                      *                    *                                      *
    *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
    *            FEBRUARY 1981             *                    *  THE HYDROLOGIC ENGINEERING CENTER   *
    *          REVISED  6 FEB 87           *                    *         609 SECOND STREET            *
    *                                      *                    *      DAVIS, CALIFORNIA 95616         *
    *  RUN DATE  01/29/1990  TIME  15:35:23 *                    *  (916) 440-3285 OR (FTS) 448-3285    *
    *                                      *                    *                                      *
    ****************************************                    ****************************************


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

    IT          HYDROGRAPH TIME DATA
                      NMIN         15  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1    0  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ        120  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      2    0  ENDING DATE
                    NDTIME        0545  ENDING TIME
                    ICENT           19  CENTURY MARK

                  COMPUTATION INTERVAL     .25 HOURS
                       TOTAL TIME BASE   29.75 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
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23 JD          INDEX STORM NO. 1
                    STRM        3.65  PRECIPITATION DEPTH
                    TRDA         .01  TRANSPOSITION DRAINAGE AREA

24 PI            PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .02      .02      .02      .02      .19      .19      .04      .04
                  .02      .02      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00

29 JD          INDEX STORM NO. 2
                    STRM        3.47  PRECIPITATION DEPTH
                    TRDA       10.00  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .02      .02      .02      .02      .19      .19      .04      .04
                  .02      .02      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00

30 JD          INDEX STORM NO. 3
                    STRM        3.36  PRECIPITATION DEPTH
                    TRDA       20.00  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .02      .02      .02      .02      .19      .19      .04      .04
                  .02      .02      .01      .01      .01      .01      .01      .01      .01      .01
                  .01      .01      .01      .01      .01      .01      .01      .01      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                  .00      .00      .00      .00      .00      .00
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31 JD INDEX STORM NO. 4

STRM 3.29 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

32 JD INDEX STORM NO. 5

STRM 3.25 PRECIPITATION DEPTH

TRDA 40.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

33 JD INDEX STORM NO. 6

STRM 3.21 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

34 JD INDEX STORM NO. 7

STRM 3.18 PRECIPITATION DEPTH

TRDA 60.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

35 JD INDEX STORM NO. 8

STRM 3.14 PRECIPITATION DEPTH

TRDA 70.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

36 JD INDEX STORM NO. 9

STRM 3.14 PRECIPITATION DEPTH

TRDA 80.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	S1004	56.	12.25	10.	3.	3.	.06		
+	ROUTED TO	R1005	50.	12.50	10.	3.	3.	.06		
+	HYDROGRAPH AT	S1008	25.	12.50	8.	2.	2.	.05		
+	2 COMBINED AT	C1009	74.	12.50	17.	6.	4.	.11		
+	ROUTED TO	R1011	73.	12.50	17.	6.	4.	.11		
+	HYDROGRAPH AT	S1012	22.	12.75	7.	2.	2.	.06		
+	ROUTED TO	R1013	21.	12.75	7.	2.	2.	.06		
+	HYDROGRAPH AT	S1016	13.	12.75	4.	1.	1.	.04		
+	2 COMBINED AT	C1017	33.	12.75	12.	4.	3.	.10		
+	ROUTED TO	R1019	32.	12.75	11.	4.	3.	.10		
+	2 COMBINED AT	C1021	98.	12.50	29.	9.	7.	.21		
+	DIVERSION TO	D1023	98.	12.50	29.	9.	7.	.21		
+	HYDROGRAPH AT	DV1023	0.	.25	0.	0.	0.	.21		
+	HYDROGRAPH AT	S1024	32.	12.75	11.	4.	3.	.09		
+	ROUTED TO	R1025	32.	12.75	11.	4.	3.	.09		
+	HYDROGRAPH AT	S1028	34.	12.50	10.	3.	3.	.06		
	3 COMBINED AT									

+		C1029	61.	12.50	21.	7.	5.	.37
	DIVERSION TO							
+		D1031	45.	12.50	16.	5.	4.	.37
	HYDROGRAPH AT							
+		DV1031	15.	12.50	5.	2.	1.	.37
	ROUTED TO							
+		R1033	15.	12.75	5.	2.	1.	.37
	HYDROGRAPH AT							
+		S1034	73.	12.25	12.	4.	3.	.06
	2 COMBINED AT							
+		C1035	79.	12.25	17.	5.	4.	.43
	DIVERSION TO							
+		D1037	67.	12.25	14.	4.	4.	.43
	HYDROGRAPH AT							
+		DV1037	12.	12.25	2.	1.	1.	.43
	ROUTED TO							
+		R1039	10.	12.25	3.	1.	1.	.43
	HYDROGRAPH AT							
+		S1040	15.	12.75	5.	2.	1.	.04
	2 COMBINED AT							
+		C1041	23.	12.50	7.	2.	2.	.47
	DIVERSION TO							
+		D1043	22.	12.50	7.	2.	2.	.47
	HYDROGRAPH AT							
+		DV1043	1.	12.50	0.	0.	0.	.47
	ROUTED TO							
+		R1045	1.	12.50	0.	0.	0.	.47
	HYDROGRAPH AT							
+		S1046	45.	12.75	15.	5.	4.	.12
	2 COMBINED AT							
+		C1047	44.	12.75	16.	5.	4.	.59
	DIVERSION TO							
+		D1049	33.	12.75	12.	4.	3.	.59
	HYDROGRAPH AT							
+		DV1049	11.	12.75	4.	1.	1.	.59
	ROUTED TO							
+		R1051	11.	12.75	4.	1.	1.	.59
	HYDROGRAPH AT							
+		S1052	81.	12.75	28.	9.	7.	.21

	2 COMBINED AT							
+		C1053	89.	12.75	31.	10.	8.	.80
	DIVERSION TO							
+		D1055	89.	12.75	31.	10.	8.	.80
	HYDROGRAPH AT							
+		DV1055	0.	.25	0.	0.	0.	.80
	HYDROGRAPH AT							
+		S1056	36.	12.75	14.	5.	4.	.12
	DIVERSION TO							
+		D1057	1.	12.25	1.	0.	0.	.12
	HYDROGRAPH AT							
+		DV1057	35.	12.75	13.	4.	3.	.12
	ROUTED TO							
+		R1059	34.	13.00	13.	4.	3.	.12
	HYDROGRAPH AT							
+		S1060	89.	12.50	27.	9.	7.	.16
	DIVERSION TO							
+		B1061	1.	12.00	1.	0.	0.	.16
	HYDROGRAPH AT							
+		B1061	88.	12.50	26.	8.	7.	.16
	ROUTED TO							
+		R1063	86.	12.75	26.	8.	7.	.16
	HYDROGRAPH AT							
+		S1064	222.	12.50	55.	17.	14.	.42
	3 COMBINED AT							
+		C1065	315.	12.50	92.	30.	24.	.70
	DIVERSION TO							
+		D1067	1.	12.00	1.	1.	1.	.70
	HYDROGRAPH AT							
+		DV1067	314.	12.50	91.	29.	23.	.70
	ROUTED TO							
+		R1069	304.	12.50	91.	29.	23.	.70
	HYDROGRAPH AT							
+		S1070	15.	12.75	6.	2.	2.	.05
	2 COMBINED AT							
+		C1071	316.	12.50	96.	31.	25.	.75
	DIVERSION TO							
+		D1073	1.	11.75	1.	1.	1.	.75
	HYDROGRAPH AT							
+		DV1073	315.	12.50	95.	30.	24.	.75

	ROUTED TO						
+		R1075	304.	12.50	96.	30.	24.	.75
	2 COMBINED AT						
+		C1077	299.	12.50	95.	30.	24.	1.55
	HYDROGRAPH AT						
+		S1078	151.	12.25	26.	8.	6.	.15
	DIVERSION TO						
+		B1079	1.	12.00	1.	0.	0.	.15
	HYDROGRAPH AT						
+		B1079	150.	12.25	25.	8.	6.	.15
	HYDROGRAPH AT						
+		S1080	51.	12.25	10.	3.	2.	.07
	ROUTED TO						
+		R1081	47.	12.50	10.	3.	2.	.07
	HYDROGRAPH AT						
+		S1084	14.	12.75	5.	1.	1.	.04
	ROUTED TO						
+		R1085	13.	12.75	5.	2.	1.	.04
	3 COMBINED AT						
+		C1087	199.	12.25	39.	12.	10.	.26
	ROUTED TO						
+		R1089	190.	12.50	39.	12.	10.	.26
	HYDROGRAPH AT						
+		S1090	109.	12.75	36.	12.	9.	.31
	2 COMBINED AT						
+		C1091	286.	12.50	74.	24.	19.	.57
	HYDROGRAPH AT						
+		S1094	53.	12.75	17.	6.	5.	.15
	DIVERSION TO						
+		D1095	13.	12.75	4.	1.	1.	.15
	HYDROGRAPH AT						
+		DV1095	40.	12.75	13.	4.	3.	.15
	ROUTED TO						
+		R1097	39.	12.75	13.	4.	3.	.15
	HYDROGRAPH AT						
+		S1098	60.	12.75	20.	6.	5.	.17
	2 COMBINED AT						
+		C1099	98.	12.75	32.	11.	9.	.32
	DIVERSION TO						

+		D1101	73.	12.75	24.	8.	6.	.32
	HYDROGRAPH AT							
+		DV1101	24.	12.75	8.	3.	2.	.32
	ROUTED TO							
+		R1103	23.	12.75	8.	3.	2.	.32
	HYDROGRAPH AT							
+		S1104	61.	12.75	23.	8.	6.	.20
	2 COMBINED AT							
+		C1105	82.	12.75	30.	10.	8.	.52
	DIVERSION TO							
+		D1107	62.	12.75	23.	8.	6.	.52
	HYDROGRAPH AT							
+		DV1107	21.	12.75	8.	3.	2.	.52
	ROUTED TO							
+		R1109	20.	13.00	8.	3.	2.	.52
	HYDROGRAPH AT							
+		S1110	30.	12.50	8.	3.	2.	.06
	ROUTED TO							
+		R1111	30.	12.75	8.	3.	2.	.06
	HYDROGRAPH AT							
+		S1112	112.	13.00	49.	16.	13.	.44
	3 COMBINED AT							
+		C1113	154.	13.00	63.	21.	17.	1.02
	DIVERSION TO							
+		D1115	116.	13.00	47.	16.	13.	1.02
	HYDROGRAPH AT							
+		DV1115	39.	13.00	16.	5.	4.	1.02
	ROUTED TO							
+		R1117	38.	13.00	16.	5.	4.	1.02
	HYDROGRAPH AT							
+		S1118	32.	12.75	11.	3.	3.	.09
	2 COMBINED AT							
+		C1119	65.	12.75	26.	9.	7.	1.11
	DIVERSION TO							
+		D1121	33.	12.75	13.	4.	4.	1.11
	HYDROGRAPH AT							
+		DV1121	33.	12.75	13.	4.	4.	1.11
	ROUTED TO							
+		R1123	32.	13.00	13.	4.	4.	1.11

	2 COMBINED AT								
+		C1125	300.	12.50	86.	28.	22.	1.68	
	ROUTED TO								
+		B1127	116.	14.00	41.	15.	12.	1.68	
+									2.06 15.00
	2 COMBINED AT								
+		C1129	294.	12.50	129.	44.	36.	3.22	
	DIVERSION TO								
+		D1131	1.	12.00	1.	1.	1.	3.22	
	HYDROGRAPH AT								
+		DV1131	293.	12.50	128.	43.	35.	3.22	
	HYDROGRAPH AT								
+		S1132	361.	12.25	55.	17.	14.	.31	
	ROUTED TO								
+		B1133	357.	12.25	54.	16.	13.	.31	
+									1.07 12.25
	DIVERSION TO								
+		D1135	268.	12.25	41.	12.	10.	.31	
	HYDROGRAPH AT								
+		DV1135	89.	12.25	14.	4.	3.	.31	
	ROUTED TO								
+		R1137	83.	12.25	14.	4.	3.	.31	
	HYDROGRAPH AT								
+		S1138	24.	12.75	8.	2.	2.	.06	
	2 COMBINED AT								
+		C1139	100.	12.25	21.	7.	5.	.37	
	DIVERSION TO								
+		D1141	50.	12.25	11.	3.	3.	.37	
	HYDROGRAPH AT								
+		DV1141	50.	12.25	11.	3.	3.	.37	
	ROUTED TO								
+		R1143	42.	12.25	11.	3.	3.	.37	
	HYDROGRAPH AT								
+		S1144	49.	13.00	21.	7.	6.	.19	
	2 COMBINED AT								
+		C1145	79.	12.50	31.	10.	8.	.56	
	DIVERSION TO								
+		D1147	79.	12.50	31.	10.	8.	.56	
	HYDROGRAPH AT								
+		DV1147	0.	.25	0.	0.	0.	.56	

	HYDROGRAPH AT								
+		S1148	95.	12.50	29.	9.	8.	.24	
	HYDROGRAPH AT								
+		S1150	69.	12.75	22.	7.	6.	.18	
	2 COMBINED AT								
+		C1151	156.	12.50	50.	16.	13.	.42	
	ROUTED TO								
+		B1153	151.	12.75	50.	16.	13.	.42	
+									69.70 12.75
	ROUTED TO								
+		R1155	151.	12.75	50.	16.	13.	.42	
	ROUTED TO								
+		R1157	147.	12.75	50.	16.	13.	.42	
	HYDROGRAPH AT								
+		S1158	57.	12.50	17.	6.	4.	.14	
	2 COMBINED AT								
+		C1159	193.	12.75	67.	22.	18.	.55	
	DIVERSION TO								
+		D1161	193.	12.75	67.	22.	18.	.55	
	HYDROGRAPH AT								
+		DV1161	0.	.25	0.	0.	0.	.55	
	HYDROGRAPH AT								
+		S1162	12.	12.50	3.	1.	1.	.03	
	ROUTED TO								
+		R1163	12.	12.50	3.	1.	1.	.03	
	HYDROGRAPH AT								
+		S1164	15.	12.50	4.	1.	1.	.04	
	2 COMBINED AT								
+		C1165	26.	12.50	7.	2.	2.	.06	
	DIVERSION TO								
+		D1167	26.	12.50	7.	2.	2.	.06	
	HYDROGRAPH AT								
+		DV1167	0.	.25	0.	0.	0.	.06	
	HYDROGRAPH AT								
+		S1168	89.	12.50	28.	9.	7.	.21	
	ROUTED TO								
+		R1169	86.	12.50	29.	9.	7.	.21	
	HYDROGRAPH AT								
+		S1170	338.	12.50	105.	34.	27.	.73	
	2 COMBINED AT								

+		C1171	420.	12.50	133.	43.	35.	.94
	DIVERSION TO							
+		B1173	1.	12.00	1.	0.	0.	.94
	HYDROGRAPH AT							
+		B1173	419.	12.50	132.	43.	34.	.94
	ROUTED TO							
+		R1175	418.	12.50	132.	43.	34.	.94
	ROUTED TO							
+		R1177	407.	12.50	132.	43.	35.	.94
	HYDROGRAPH AT							
+		S1178	16.	12.50	5.	2.	1.	.04
	2 COMBINED AT							
+		C1179	422.	12.50	137.	44.	36.	.98
	DIVERSION TO							
+		D1181	422.	12.50	137.	44.	36.	.98
	HYDROGRAPH AT							
+		DV1181	0.	.25	0.	0.	0.	.98
	5 COMBINED AT							
+		C1183	293.	12.50	128.	43.	35.	5.38
	HYDROGRAPH AT							
+		S1184	302.	12.50	89.	29.	23.	.67
	DIVERSION TO							
+		D1185	302.	12.50	89.	29.	23.	.67
	HYDROGRAPH AT							
+		DV1185	0.	.25	0.	0.	0.	.67
	HYDROGRAPH AT							
+		S1186	144.	12.75	57.	19.	15.	.50
	DIVERSION TO							
+		D1187	144.	12.75	57.	19.	15.	.50
	HYDROGRAPH AT							
+		DV1187	0.	.25	0.	0.	0.	.50
	HYDROGRAPH AT							
+		S1190	45.	12.75	14.	5.	4.	.11
	DIVERSION TO							
+		D1191	45.	12.75	14.	5.	4.	.11
	HYDROGRAPH AT							
+		DV1191	0.	.25	0.	0.	0.	.11
	HYDROGRAPH AT							
+		S1194	183.	12.75	61.	20.	16.	.50

	ROUTED TO						
+	R1195	183.	12.75	61.	20.	16.	.50
	HYDROGRAPH AT						
+	S1198	142.	12.75	54.	18.	14.	.45
	2 COMBINED AT						
+	C1199	323.	12.75	113.	37.	30.	.95
	DIVERSION TO						
+	D1201	323.	12.75	113.	37.	30.	.95
	HYDROGRAPH AT						
+	DV1201	0.	.25	0.	0.	0.	.95
	5 COMBINED AT						
+	C1203	293.	12.50	128.	43.	35.	7.62
	HYDROGRAPH AT						
+	S1204	52.	12.50	16.	5.	4.	.14
	ROUTED TO						
+	R1205	49.	13.00	17.	6.	4.	.14
	HYDROGRAPH AT						
+	S1208	122.	12.50	37.	12.	10.	.30
	ROUTED TO						
+	R1209	114.	12.75	36.	12.	10.	.30
	HYDROGRAPH AT						
+	S1212	60.	12.50	19.	6.	5.	.16
	ROUTED TO						
+	R1213	57.	12.75	19.	6.	5.	.16
	HYDROGRAPH AT						
+	S1216	116.	12.75	49.	16.	13.	.44
	4 COMBINED AT						
+	C1217	327.	12.75	118.	39.	32.	1.03
	HYDROGRAPH AT						
+	S1220	85.	12.75	28.	9.	7.	.24
	ROUTED TO						
+	R1221	84.	13.00	27.	9.	7.	.24
	HYDROGRAPH AT						
+	S1224	200.	12.50	65.	21.	17.	.54
	2 COMBINED AT						
+	C1225	258.	12.75	91.	30.	24.	.77
	DIVERSION TO						
+	D1227	193.	12.75	68.	22.	18.	.77
	HYDROGRAPH AT						
+	DV1227	64.	12.75	23.	7.	6.	.77

	ROUTED TO						
+	R1229	62.	13.00	23.	7.	6.	.77
	2 COMBINED AT						
+	C1231	382.	12.75	139.	46.	37.	1.80
	DIVERSION TO						
+	D1233	382.	12.75	139.	46.	37.	1.80
	HYDROGRAPH AT						
+	DV1233	0.	.25	0.	0.	0.	1.80
	HYDROGRAPH AT						
+	S1234	111.	12.50	34.	11.	9.	.22
	DIVERSION TO						
+	D1235	111.	12.50	34.	11.	9.	.22
	HYDROGRAPH AT						
+	DV1235	0.	.25	0.	0.	0.	.22
	HYDROGRAPH AT						
+	S1238	98.	12.50	25.	8.	7.	.20
	DIVERSION TO						
+	D1239	49.	12.50	13.	4.	3.	.20
	HYDROGRAPH AT						
+	DV1239	49.	12.50	13.	4.	3.	.20
	ROUTED TO						
+	R1241	43.	12.50	12.	4.	3.	.20
	HYDROGRAPH AT						
+	S1242	136.	12.75	42.	14.	11.	.35
	2 COMBINED AT						
+	C1243	176.	12.75	54.	18.	14.	.56
	DIVERSION TO						
+	D1245	88.	12.75	27.	9.	7.	.56
	HYDROGRAPH AT						
+	DV1245	88.	12.75	27.	9.	7.	.56
	ROUTED TO						
+	R1247	86.	12.75	27.	9.	7.	.56
	HYDROGRAPH AT						
+	S1248	90.	12.50	25.	8.	6.	.19
	2 COMBINED AT						
+	C1249	154.	12.50	51.	17.	13.	.75
	DIVERSION TO						
+	D1251	39.	12.50	13.	4.	3.	.75
	HYDROGRAPH AT						

+	DV1251	116.	12.50	38.	13.	10.	.75
ROUTED TO							
+	R1253	114.	12.75	38.	13.	10.	.75
HYDROGRAPH AT							
+	S1254	61.	12.75	21.	7.	5.	.16
2 COMBINED AT							
+	C1255	172.	12.75	59.	19.	15.	.91
DIVERSION TO							
+	D1257	172.	12.75	59.	19.	15.	.91
HYDROGRAPH AT							
+	DV1257	0.	.25	0.	0.	0.	.91
HYDROGRAPH AT							
+	S1258	85.	12.75	27.	9.	7.	.22
HYDROGRAPH AT							
+	S1260	41.	12.50	8.	3.	2.	.06
ROUTED TO							
+	R1261	40.	12.50	8.	3.	2.	.06
HYDROGRAPH AT							
+	S1264	113.	12.75	37.	12.	10.	.30
2 COMBINED AT							
+	C1265	147.	12.50	44.	14.	12.	.36
DIVERSION TO							
+	D1267	73.	12.50	22.	7.	6.	.36
HYDROGRAPH AT							
+	DV1267	73.	12.50	22.	7.	6.	.36
ROUTED TO							
+	R1269	71.	12.75	22.	7.	6.	.36
2 COMBINED AT							
+	C1271	154.	12.75	49.	16.	13.	.58
DIVERSION TO							
+	D1273	154.	12.75	49.	16.	13.	.58
HYDROGRAPH AT							
+	DV1273	0.	.25	0.	0.	0.	.58
5 COMBINED AT							
+	C1275	294.	12.50	128.	43.	35.	11.13
HYDROGRAPH AT							
+	S1276	55.	12.50	17.	6.	4.	.14
DIVERSION TO							
+	D1277	55.	12.50	17.	6.	4.	.14

	HYDROGRAPH AT						
+		DV1277	0.	.25	0.	0.	0.	.14
	HYDROGRAPH AT						
+		S1278	46.	12.75	15.	5.	4.	.13
	DIVERSION TO						
+		D1279	46.	12.75	15.	5.	4.	.13
	HYDROGRAPH AT						
+		DV1279	0.	.25	0.	0.	0.	.13
	HYDROGRAPH AT						
+		S1282	128.	12.75	49.	16.	13.	.44
	DIVERSION TO						
+		D1283	128.	12.75	49.	16.	13.	.44
	HYDROGRAPH AT						
+		DV1283	0.	.25	0.	0.	0.	.44
	4 COMBINED AT						
+		C1285	294.	12.50	128.	43.	35.	11.85
	ROUTED TO						
+		R2001	271.	12.75	122.	42.	34.	11.85
	HYDROGRAPH AT						
+		S2004	32.	12.75	13.	4.	3.	.11
	2 COMBINED AT						
+		C2005	298.	12.75	134.	46.	37.	11.96
	ROUTED TO						
+		R2007	282.	12.75	133.	46.	37.	11.96
	HYDROGRAPH AT						
+		H2008	2776.	13.00	615.	177.	143.	4.53
	ROUTED TO						
+		R2009	2617.	13.50	641.	184.	149.	4.53
	HYDROGRAPH AT						
+		S2012	100.	12.75	32.	10.	8.	.22
	2 COMBINED AT						
+		C2013	2664.	13.50	671.	194.	157.	4.75
	ROUTED TO						
+		R2015	2644.	13.50	673.	195.	157.	4.75
	HYDROGRAPH AT						
+		S2016	138.	12.75	49.	16.	13.	.42
	ROUTED TO						
+		R2017	131.	12.75	49.	16.	13.	.42
	HYDROGRAPH AT						
+		D1283	128.	12.75	49.	16.	13.	.44

	ROUTED TO						
+	R2019	127.	13.00	48.	16.	13.	.44
	HYDROGRAPH AT						
+	S2022	40.	13.25	21.	7.	6.	.18
	2 COMBINED AT						
+	C2023	169.	13.00	69.	24.	19.	.18
	DIVERSION TO						
+	D2025	127.	13.00	57.	19.	15.	.18
	HYDROGRAPH AT						
+	DV2025	43.	13.00	12.	4.	4.	.18
	ROUTED TO						
+	R2027	41.	13.25	12.	4.	4.	.18
	HYDROGRAPH AT						
+	S2028	52.	12.50	14.	5.	4.	.10
	4 COMBINED AT						
+	C2029	2782.	13.50	744.	219.	177.	5.45
	DIVERSION TO						
+	D2030	2782.	13.50	744.	219.	177.	5.45
	HYDROGRAPH AT						
+	DV2030	0.	.25	0.	0.	0.	5.45
	HYDROGRAPH AT						
+	D2025	127.	13.00	57.	19.	15.	.18
	ROUTED TO						
+	R2031	121.	13.25	57.	19.	15.	.18
	HYDROGRAPH AT						
+	D1279	46.	12.75	15.	5.	4.	.13
	DIVERSION TO						
+	D2032	11.	12.75	4.	1.	1.	.13
	HYDROGRAPH AT						
+	DV2032	35.	12.75	12.	4.	3.	.13
	ROUTED TO						
+	R2033	34.	12.75	11.	4.	3.	.13
	HYDROGRAPH AT						
+	S2034	43.	12.50	13.	4.	3.	.10
	2 COMBINED AT						
+	C2035	69.	12.75	24.	8.	6.	.23
	ROUTED TO						
+	R2036	67.	12.75	24.	8.	6.	.23
	HYDROGRAPH AT						

+		S2037	72.	12.50	19.	6.	5.	.11
	4 COMBINED AT							
+		C2038	207.	13.00	94.	32.	26.	5.79
	DIVERSION TO							
+		D2039	207.	13.00	94.	32.	26.	5.79
	HYDROGRAPH AT							
+		DV2039	0.	.25	0.	0.	0.	5.79
	HYDROGRAPH AT							
+		S2040	54.	12.25	8.	2.	2.	.04
	2 COMBINED AT							
+		C2041	51.	12.25	7.	2.	2.	5.83
	DIVERSION TO							
+		D2043	51.	12.25	7.	2.	2.	5.83
	HYDROGRAPH AT							
+		DV2043	0.	.25	0.	0.	0.	5.83
	HYDROGRAPH AT							
+		D2032	11.	12.75	4.	1.	1.	.13
	ROUTED TO							
+		R2047	11.	13.00	4.	1.	1.	.13
	HYDROGRAPH AT							
+		S2048	21.	12.50	4.	1.	1.	.03
	2 COMBINED AT							
+		C2049	28.	12.50	8.	3.	2.	.03
	ROUTED TO							
+		R2051	25.	12.50	8.	3.	2.	.03
	HYDROGRAPH AT							
+		D1277	55.	12.50	17.	6.	4.	.14
	ROUTED TO							
+		R2055	54.	12.75	17.	6.	5.	.14
	HYDROGRAPH AT							
+		S2056	18.	12.75	6.	2.	2.	.04
	3 COMBINED AT							
+		C2057	97.	12.75	31.	10.	8.	.08
	ROUTED TO							
+		R2059	91.	12.75	31.	10.	8.	.08
	HYDROGRAPH AT							
+		S2060	34.	12.75	12.	4.	3.	.09
	3 COMBINED AT							
+		C2061	116.	12.75	41.	14.	11.	5.99

	DIVERSION TO						
+		D2063	116.	12.75	41.	14.	11.	5.99
	HYDROGRAPH AT						
+		DV2063	0.	.25	0.	0.	0.	5.99
	HYDROGRAPH AT						
+		S2064	73.	12.75	25.	8.	6.	.15
	ROUTED TO						
+		R2065	72.	12.75	25.	8.	6.	.15
	HYDROGRAPH AT						
+		D1267	73.	12.50	22.	7.	6.	.36
	ROUTED TO						
+		R2067	72.	12.75	22.	7.	6.	.36
	HYDROGRAPH AT						
+		S2070	62.	12.50	15.	5.	4.	.10
	2 COMBINED AT						
+		C2071	125.	12.50	38.	12.	10.	.10
	ROUTED TO						
+		R2073	121.	12.75	38.	12.	10.	.10
	HYDROGRAPH AT						
+		S2074	123.	12.50	36.	11.	9.	.22
	4 COMBINED AT						
+		C2075	286.	12.75	94.	30.	25.	6.46
	DIVERSION TO						
+		D2076	243.	12.75	80.	26.	21.	6.46
	HYDROGRAPH AT						
+		DV2076	43.	12.75	14.	5.	4.	6.46
	ROUTED TO						
+		R2077	43.	12.75	14.	5.	4.	6.46
	HYDROGRAPH AT						
+		D1273	154.	12.75	49.	16.	13.	.58
	ROUTED TO						
+		R2079	147.	12.75	49.	16.	13.	.58
	HYDROGRAPH AT						
+		S2080	81.	12.25	19.	6.	5.	.11
	2 COMBINED AT						
+		C2081	202.	12.75	68.	22.	18.	.11
	ROUTED TO						
+		R2083	198.	12.75	68.	22.	18.	.11
	HYDROGRAPH AT						
+		S2084	81.	12.25	13.	4.	3.	.08

	ROUTED TO						
+	R2085	70.	12.25	13.	4.	3.	.08
	HYDROGRAPH AT						
+	S2088	38.	12.75	13.	4.	3.	.08
	ROUTED TO						
+	R2089	38.	12.75	13.	4.	3.	.08
	HYDROGRAPH AT						
+	S2092	158.	12.50	44.	14.	11.	.25
	5 COMBINED AT						
+	C2093	446.	12.50	145.	47.	38.	6.98
	DIVERSION TO						
+	D2095	446.	12.50	145.	47.	38.	6.98
	HYDROGRAPH AT						
+	DV2095	0.	.25	0.	0.	0.	6.98
	HYDROGRAPH AT						
+	D1239	49.	12.50	13.	4.	3.	.20
	ROUTED TO						
+	R2097	48.	12.75	13.	4.	3.	.20
	HYDROGRAPH AT						
+	D1245	88.	12.75	27.	9.	7.	.56
	ROUTED TO						
+	R2099	83.	12.75	27.	9.	7.	.56
	HYDROGRAPH AT						
+	S2100	103.	12.25	18.	6.	5.	.10
	3 COMBINED AT						
+	C2101	194.	12.50	59.	19.	15.	.10
	ROUTED TO						
+	R2103	185.	12.75	58.	19.	15.	.10
	HYDROGRAPH AT						
+	D1251	39.	12.50	13.	4.	3.	.75
	ROUTED TO						
+	R2105	38.	12.75	13.	4.	3.	.75
	HYDROGRAPH AT						
+	S2106	11.	12.50	2.	1.	0.	.01
	2 COMBINED AT						
+	C2107	47.	12.75	16.	5.	4.	.01
	ROUTED TO						
+	R2109	47.	13.00	16.	5.	4.	.01
	HYDROGRAPH AT						

+		S2110	190.	12.50	41.	13.	10.	.25
	4 COMBINED AT							
+		C2111	337.	12.50	108.	35.	28.	7.34
	DIVERSION TO							
+		D2112	236.	12.50	76.	25.	20.	7.34
	HYDROGRAPH AT							
+		DV2112	101.	12.50	33.	11.	9.	7.34
	ROUTED TO							
+		R2113	98.	12.75	32.	11.	8.	7.34
	HYDROGRAPH AT							
+		S2114	95.	12.25	17.	5.	4.	.10
	ROUTED TO							
+		R2115	94.	12.50	18.	5.	4.	.10
	HYDROGRAPH AT							
+		D1257	172.	12.75	59.	19.	15.	.91
	ROUTED TO							
+		R2117	165.	12.75	58.	19.	15.	.91
	HYDROGRAPH AT							
+		S2120	95.	12.25	16.	5.	4.	.10
	2 COMBINED AT							
+		C2121	208.	12.75	76.	25.	20.	.10
	ROUTED TO							
+		R2123	205.	12.75	76.	25.	20.	.10
	HYDROGRAPH AT							
+		S2124	77.	12.50	15.	5.	4.	.11
	HYDROGRAPH AT							
+		S2128	123.	12.25	21.	7.	5.	.12
	5 COMBINED AT							
+		C2129	509.	12.50	154.	50.	40.	7.76
	DIVERSION TO							
+		D2131	509.	12.50	154.	50.	40.	7.76
	HYDROGRAPH AT							
+		DV2131	0.	.25	0.	0.	0.	7.76
	HYDROGRAPH AT							
+		D1227	193.	12.75	68.	22.	18.	.77
	ROUTED TO							
+		R2133	186.	13.00	68.	22.	18.	.77
	HYDROGRAPH AT							
+		S2136	104.	12.50	28.	9.	7.	.16

	2 COMBINED AT								
+		C2137	259.	12.75	97.	32.	26.	.16	
	ROUTED TO								
+		R2139	256.	12.75	97.	32.	26.	.16	
	HYDROGRAPH AT								
+		S2140	38.	12.25	9.	3.	2.	.05	
	ROUTED TO								
+		R2141	37.	12.25	9.	3.	2.	.05	
	HYDROGRAPH AT								
+		S2144	70.	12.25	10.	3.	3.	.05	
	ROUTED TO								
+		R2145	64.	12.25	11.	3.	3.	.05	
	HYDROGRAPH AT								
+		S2148	63.	12.50	19.	6.	5.	.15	
	4 COMBINED AT								
+		C2149	352.	12.50	132.	43.	35.	.40	
	ROUTED TO								
+		R2151	347.	12.75	132.	43.	35.	.40	
	HYDROGRAPH AT								
+		S2154	175.	12.25	28.	9.	7.	.12	
	3 COMBINED AT								
+		C2155	412.	12.50	152.	50.	41.	8.28	
	DIVERSION TO								
+		D2157	3.	12.50	1.	0.	0.	8.28	
	HYDROGRAPH AT								
+		DV2157	410.	12.50	151.	50.	40.	8.28	
	ROUTED TO								
+		R2159	398.	12.50	151.	50.	40.	8.28	
	HYDROGRAPH AT								
+		S2160	40.	12.50	11.	4.	3.	.09	
	2 COMBINED AT								
+		C2161	433.	12.50	161.	53.	43.	8.37	
	ROUTED TO								
+		B2163	423.	12.75	161.	53.	43.	8.37	
+									66.88 12.50
	ROUTED TO								
+		R2165	423.	12.75	161.	53.	43.	8.37	
	DIVERSION TO								
+		D2167	423.	12.75	161.	53.	43.	8.37	
	HYDROGRAPH AT								

+	DV2167	0.	.25	0.	0.	0.	8.37
HYDROGRAPH AT							
+	D1233	382.	12.75	139.	46.	37.	1.80
ROUTED TO							
+	R2169	366.	13.00	140.	47.	38.	1.80
HYDROGRAPH AT							
+	S2170	106.	12.25	20.	6.	5.	.11
HYDROGRAPH AT							
+	D1235	111.	12.50	34.	11.	9.	.22
DIVERSION TO							
+	D2171	55.	12.50	17.	5.	4.	.22
HYDROGRAPH AT							
+	DV2171	55.	12.50	17.	5.	4.	.22
ROUTED TO							
+	R2173	54.	12.75	17.	5.	4.	.22
HYDROGRAPH AT							
+	S2174	14.	12.50	4.	1.	1.	.04
2 COMBINED AT							
+	C2175	67.	12.75	21.	7.	6.	.25
ROUTED TO							
+	R2176	65.	12.75	22.	7.	6.	.25
HYDROGRAPH AT							
+	D2171	55.	12.50	17.	5.	4.	.22
ROUTED TO							
+	R2177	55.	12.75	17.	6.	4.	.22
HYDROGRAPH AT							
+	S2180	32.	12.50	10.	3.	3.	.07
5 COMBINED AT							
+	C2181	553.	12.75	209.	69.	56.	.44
ROUTED TO							
+	R2183	541.	13.00	207.	69.	56.	.44
HYDROGRAPH AT							
+	S2184	54.	12.50	18.	6.	5.	.10
ROUTED TO							
+	R2185	54.	12.75	18.	6.	5.	.10
HYDROGRAPH AT							
+	S2188	28.	12.50	9.	3.	2.	.07
4 COMBINED AT							
+	C2189	582.	13.00	225.	75.	60.	8.98

	DIVERSION TO								
+		B2191	1.	12.00	1.	1.	1.	8.98	
	HYDROGRAPH AT								
+		B2191	581.	13.00	224.	74.	60.	8.98	
	ROUTED TO								
+		R2193	581.	13.00	224.	74.	60.	8.98	
	DIVERSION TO								
+		D2195	581.	13.00	224.	74.	60.	8.98	
	HYDROGRAPH AT								
+		DV2195	0.	.25	0.	0.	0.	8.98	
	HYDROGRAPH AT								
+		S2196	47.	12.75	17.	6.	4.	.11	
	ROUTED TO								
+		R2197	45.	13.00	17.	6.	5.	.11	
	HYDROGRAPH AT								
+		S2200	45.	12.50	11.	4.	3.	.05	
	ROUTED TO								
+		R2201	45.	12.50	11.	4.	3.	.05	
	HYDROGRAPH AT								
+		S2202	13.	12.50	3.	1.	1.	.01	
	4 COMBINED AT								
+		C2203	85.	12.50	30.	10.	8.	9.16	
	ROUTED TO								
+		B2205	56.	13.25	29.	10.	8.	9.16	
+									63.12 13.50
	ROUTED TO								
+		R2207	56.	13.25	29.	10.	8.	9.16	
	HYDROGRAPH AT								
+		S2210	29.	12.75	10.	3.	3.	.08	
	2 COMBINED AT								
+		C2211	75.	13.00	38.	13.	10.	9.23	
	DIVERSION TO								
+		D2213	75.	13.00	38.	13.	10.	9.23	
	HYDROGRAPH AT								
+		DV2213	0.	.25	0.	0.	0.	9.23	
	HYDROGRAPH AT								
+		D1201	323.	12.75	113.	37.	30.	.95	
	ROUTED TO								
+		R2215	308.	13.00	113.	37.	30.	.95	
	HYDROGRAPH AT								

+		D1191	45.	12.75	14.	5.	4.	.11
	ROUTED TO							
+		R2217	45.	12.75	15.	5.	4.	.11
	HYDROGRAPH AT							
+		D1187	144.	12.75	57.	19.	15.	.50
	ROUTED TO							
+		R2219	139.	13.00	56.	19.	15.	.50
	HYDROGRAPH AT							
+		S2220	73.	12.50	22.	7.	6.	.17
	4 COMBINED AT							
+		C2221	563.	12.75	209.	69.	56.	.17
	DIVERSION TO							
+		B2223	1.	12.00	1.	1.	1.	.17
	HYDROGRAPH AT							
+		B2223	562.	12.75	208.	68.	55.	.17
	ROUTED TO							
+		R2225	560.	12.75	208.	68.	55.	.17
	DIVERSION TO							
+		D2227	280.	12.75	104.	34.	28.	.17
	HYDROGRAPH AT							
+		DV2227	280.	12.75	104.	34.	28.	.17
	ROUTED TO							
+		R2231	244.	13.25	100.	34.	27.	.17
	HYDROGRAPH AT							
+		S2234	130.	12.25	27.	8.	7.	.15
	HYDROGRAPH AT							
+		D2227	280.	12.75	104.	34.	28.	.17
	ROUTED TO							
+		R2235	277.	13.00	104.	34.	28.	.17
	3 COMBINED AT							
+		C2237	523.	13.25	224.	76.	61.	.31
	ROUTED TO							
+		R2239	514.	13.25	223.	76.	61.	.31
	HYDROGRAPH AT							
+		S2240	74.	12.25	13.	4.	3.	.08
	ROUTED TO							
+		R2241	67.	12.50	13.	4.	3.	.08
	HYDROGRAPH AT							
+		S2244	90.	12.25	15.	5.	4.	.08

	ROUTED TO						
+	R2245	77.	12.50	16.	5.	4.	.08
	HYDROGRAPH AT						
+	S2248	171.	12.50	38.	12.	10.	.21
	4 COMBINED AT						
+	C2249	583.	13.25	285.	96.	77.	.69
	HYDROGRAPH AT						
+	S2250	102.	12.25	17.	5.	4.	.10
	DIVERSION TO						
+	D2251	51.	12.25	9.	3.	2.	.10
	HYDROGRAPH AT						
+	DV2251	51.	12.25	9.	3.	2.	.10
	ROUTED TO						
+	R2253	48.	12.50	9.	3.	2.	.10
	HYDROGRAPH AT						
+	S2254	94.	12.25	16.	5.	4.	.08
	4 COMBINED AT						
+	C2255	659.	12.50	298.	100.	80.	10.10
	DIVERSION TO						
+	D2257	29.	12.50	3.	1.	1.	10.10
	HYDROGRAPH AT						
+	DV2257	630.	12.50	295.	99.	80.	10.10
	ROUTED TO						
+	R2259	594.	12.50	295.	99.	80.	10.10
	HYDROGRAPH AT						
+	S2260	90.	12.25	14.	4.	4.	.08
	HYDROGRAPH AT						
+	D1185	302.	12.50	89.	29.	23.	.67
	ROUTED TO						
+	R2261	288.	12.50	89.	29.	23.	.67
	HYDROGRAPH AT						
+	S2264	124.	12.25	21.	6.	5.	.12
	2 COMBINED AT						
+	C2265	394.	12.50	111.	36.	29.	.12
	ROUTED TO						
+	R2267	369.	12.50	111.	36.	29.	.12
	HYDROGRAPH AT						
+	S2268	102.	12.25	14.	4.	4.	.08
	2 COMBINED AT						
+	C2269	391.	12.50	123.	40.	32.	.20

	ROUTED TO						
+	R2271	372.	12.75	123.	40.	32.	.20
	HYDROGRAPH AT						
+	S2274	127.	12.25	20.	6.	5.	.11
	ROUTED TO						
+	R2275	109.	12.50	21.	6.	5.	.11
	4 COMBINED AT						
+	C2277	1076.	12.50	443.	147.	118.	10.49
	HYDROGRAPH AT						
+	D1181	422.	12.50	137.	44.	36.	.98
	ROUTED TO						
+	R2279	413.	12.75	137.	44.	36.	.98
	HYDROGRAPH AT						
+	D1167	26.	12.50	7.	2.	2.	.06
	ROUTED TO						
+	R2281	26.	12.50	8.	3.	2.	.06
	HYDROGRAPH AT						
+	S2284	71.	12.50	14.	4.	4.	.11
	HYDROGRAPH AT						
+	S2286	140.	12.25	24.	7.	6.	.11
	4 COMBINED AT						
+	C2287	593.	12.50	183.	60.	48.	.22
	ROUTED TO						
+	R2289	546.	12.75	183.	60.	48.	.22
	HYDROGRAPH AT						
+	S2290	103.	12.50	21.	6.	5.	.16
	3 COMBINED AT						
+	C2291	1657.	12.50	635.	209.	169.	10.87
	DIVERSION TO						
+	D2293	458.	12.50	70.	17.	14.	10.87
	HYDROGRAPH AT						
+	DV2293	1198.	12.50	565.	192.	154.	10.87
	ROUTED TO						
+	R2295	1178.	12.50	565.	192.	155.	10.87
	HYDROGRAPH AT						
+	D1161	193.	12.75	67.	22.	18.	.55
	ROUTED TO						
+	R2299	183.	12.75	66.	22.	18.	.55
	ROUTED TO						

+		R2301	183.	13.00	66.	22.	18.	.55	
	HYDROGRAPH AT								
+		S2304	66.	12.75	23.	8.	6.	.16	
	DIVERSION TO								
+		D2305	33.	12.75	12.	4.	3.	.16	
	HYDROGRAPH AT								
+		DV2305	33.	12.75	12.	4.	3.	.16	
	ROUTED TO								
+		R2307	32.	12.75	12.	4.	3.	.16	
	HYDROGRAPH AT								
+		S2310	76.	12.50	22.	7.	6.	.12	
	ROUTED TO								
+		R2311	75.	12.50	22.	7.	6.	.12	
	HYDROGRAPH AT								
+		S2312	31.	12.25	5.	2.	1.	.04	
	ROUTED TO								
+		B2313	0.	23.00	0.	0.	0.	.04	
+									2.74 29.75
	5 COMBINED AT								
+		C2315	1413.	12.75	658.	222.	179.	11.18	
	DIVERSION TO								
+		D2317	324.	12.75	62.	15.	12.	11.18	
	HYDROGRAPH AT								
+		DV2317	1089.	12.75	596.	207.	167.	11.18	
	ROUTED TO								
+		R2319	1088.	12.75	596.	207.	167.	11.18	
	HYDROGRAPH AT								
+		D2305	33.	12.75	12.	4.	3.	.16	
	ROUTED TO								
+		R2321	31.	13.00	12.	4.	3.	.16	
	HYDROGRAPH AT								
+		S2324	94.	12.25	16.	5.	4.	.09	
	3 COMBINED AT								
+		C2325	1150.	12.50	621.	215.	174.	11.27	
	DIVERSION TO								
+		D2327	911.	12.50	545.	196.	158.	11.27	
	HYDROGRAPH AT								
+		DV2327	240.	12.50	76.	19.	15.	11.27	
	HYDROGRAPH AT								
+		S2330	79.	12.25	12.	4.	3.	.05	

	ROUTED TO						
+	R2331	76.	12.25	12.	4.	3.	.05
	HYDROGRAPH AT						
+	D1135	268.	12.25	41.	12.	10.	.31
	ROUTED TO						
+	R2333	247.	12.25	41.	12.	10.	.31
	HYDROGRAPH AT						
+	D1141	50.	12.25	11.	3.	3.	.37
	2 COMBINED AT						
+	C2335	304.	12.25	56.	17.	14.	.00
	ROUTED TO						
+	R2337	258.	12.25	58.	17.	14.	.00
	HYDROGRAPH AT						
+	S2340	339.	12.25	53.	17.	13.	.28
	2 COMBINED AT						
+	C2341	580.	12.25	106.	32.	26.	.28
	ROUTED TO						
+	R2343	555.	12.25	106.	33.	26.	.28
	HYDROGRAPH AT						
+	S2346	389.	12.25	61.	19.	15.	.32
	4 COMBINED AT						
+	C2349	1125.	12.25	245.	72.	58.	11.92
	ROUTED TO						
+	R2351	1104.	12.25	246.	72.	58.	11.92
	HYDROGRAPH AT						
+	D1147	79.	12.50	31.	10.	8.	.56
	ROUTED TO						
+	R2353	77.	12.75	31.	10.	8.	.56
	ROUTED TO						
+	R2355	75.	13.00	31.	10.	8.	.56
	HYDROGRAPH AT						
+	S2358	54.	12.50	11.	3.	3.	.10
	ROUTED TO						
+	R2359	48.	12.75	11.	3.	3.	.10
	HYDROGRAPH AT						
+	D1095	13.	12.75	4.	1.	1.	.15
	ROUTED TO						
+	R2361	13.	13.00	5.	1.	1.	.15
	HYDROGRAPH AT						

+		S2364	22.	12.75	8.	3.	2.	.06	
	2 COMBINED AT								
+		C2365	33.	12.75	12.	4.	3.	.06	
	ROUTED TO								
+		R2367	32.	13.00	12.	4.	3.	.06	
	HYDROGRAPH AT								
+		D1101	73.	12.75	24.	8.	6.	.32	
	ROUTED TO								
+		R2369	69.	13.00	24.	8.	6.	.32	
	HYDROGRAPH AT								
+		S2370	123.	12.50	39.	13.	10.	.25	
	2 COMBINED AT								
+		C2371	191.	12.75	63.	21.	17.	.25	
	DIVERSION TO								
+		D2373	48.	12.75	16.	5.	4.	.25	
	HYDROGRAPH AT								
+		DV2373	143.	12.75	47.	15.	12.	.25	
	ROUTED TO								
+		R2375	139.	12.75	47.	15.	12.	.25	
	HYDROGRAPH AT								
+		S2376	168.	12.25	26.	8.	7.	.11	
	5 COMBINED AT								
+		C2377	328.	12.75	124.	41.	33.	.53	
	ROUTED TO								
+		R2379	327.	12.75	124.	41.	33.	.53	
	HYDROGRAPH AT								
+		S2380	147.	12.25	23.	7.	6.	.10	
	ROUTED TO								
+		B2381	3.	21.00	1.	0.	0.	.10	
+									4.43 29.75
	3 COMBINED AT								
+		C2383	1314.	12.25	362.	111.	89.	12.54	
	DIVERSION TO								
+		D2385	980.	12.25	320.	100.	81.	12.54	
	HYDROGRAPH AT								
+		DV2385	335.	12.25	41.	10.	8.	12.54	
	HYDROGRAPH AT								
+		D1107	62.	12.75	23.	8.	6.	.52	
	ROUTED TO								
+		R2387	61.	13.00	23.	8.	6.	.52	

	HYDROGRAPH AT						
+	D2373	48.	12.75	16.	5.	4.	.25
	ROUTED TO						
+	R2389	47.	12.75	16.	5.	4.	.25
	HYDROGRAPH AT						
+	S2390	95.	12.50	26.	8.	7.	.14
	3 COMBINED AT						
+	C2391	186.	12.75	65.	21.	17.	.14
	ROUTED TO						
+	R2393	183.	12.75	65.	21.	17.	.14
	HYDROGRAPH AT						
+	S2396	46.	12.75	16.	5.	4.	.09
	ROUTED TO						
+	R2397	46.	12.75	16.	5.	4.	.09
	HYDROGRAPH AT						
+	S2400	333.	12.25	52.	16.	13.	.25
	4 COMBINED AT						
+	C2401	739.	12.25	165.	50.	41.	13.02
	DIVERSION TO						
+	D2403	189.	12.25	12.	3.	2.	13.02
	HYDROGRAPH AT						
+	DV2403	550.	12.25	153.	47.	38.	13.02
	HYDROGRAPH AT						
+	D1115	116.	13.00	47.	16.	13.	1.02
	ROUTED TO						
+	R2405	115.	13.25	48.	16.	13.	1.02
	HYDROGRAPH AT						
+	D1121	33.	12.75	13.	4.	4.	1.11
	ROUTED TO						
+	R2407	32.	13.00	13.	4.	4.	1.11
	HYDROGRAPH AT						
+	S2410	34.	13.00	14.	5.	4.	.12
	3 COMBINED AT						
+	C2411	186.	13.00	76.	26.	21.	.12
	ROUTED TO						
+	R2413	184.	13.25	76.	26.	21.	.12
	HYDROGRAPH AT						
+	S2416	99.	12.25	18.	6.	4.	.12
	4 COMBINED AT						

+		C2417	842.	12.50	341.	114.	92.	25.22
	DIVERSION TO							
+		D2419	842.	12.50	341.	114.	92.	25.22
	HYDROGRAPH AT							
+		DV2419	0.	.25	0.	0.	0.	25.22
	HYDROGRAPH AT							
+		D1023	98.	12.50	29.	9.	7.	.21
	HYDROGRAPH AT							
+		S3002	69.	12.25	14.	4.	3.	.09
	3 COMBINED AT							
+		C3003	142.	12.50	37.	12.	10.	25.32
	ROUTED TO							
+		R3005	139.	12.50	37.	12.	10.	25.32
	HYDROGRAPH AT							
+		S3008	89.	12.25	14.	4.	4.	.07
	2 COMBINED AT							
+		C3009	190.	12.50	50.	16.	13.	25.39
	ROUTED TO							
+		R3011	187.	12.50	49.	16.	13.	25.39
	HYDROGRAPH AT							
+		S3012	173.	12.50	34.	11.	9.	.19
	ROUTED TO							
+		R3013	171.	12.50	34.	11.	9.	.19
	HYDROGRAPH AT							
+		S3016	31.	12.50	9.	3.	2.	.15
	ROUTED TO							
+		R3017	30.	12.75	9.	3.	2.	.15
	HYDROGRAPH AT							
+		S3020	163.	12.25	28.	9.	7.	.13
	ROUTED TO							
+		B3021	23.	13.00	10.	4.	3.	.13
	4 COMBINED AT							
+		C3023	351.	12.50	93.	31.	25.	25.85
	ROUTED TO							
+		R3025	314.	12.50	93.	31.	25.	25.85
	HYDROGRAPH AT							
+		D1031	45.	12.50	16.	5.	4.	.37
	ROUTED TO							
+		R3027	45.	12.75	15.	5.	4.	.37

	HYDROGRAPH AT						
+	S3028	311.	12.25	53.	17.	13.	.27
	ROUTED TO						
+	B3029	152.	12.75	27.	9.	7.	.27
	2 COMBINED AT						
+	C3031	197.	12.75	42.	14.	11.	.27
	DIVERSION TO						
+	D3033	99.	12.75	21.	7.	6.	.27
	HYDROGRAPH AT						
+	DV3033	99.	12.75	21.	7.	6.	.27
	ROUTED TO						
+	R3035	74.	13.00	22.	7.	6.	.27
	HYDROGRAPH AT						
+	S3038	144.	12.25	24.	7.	6.	.13
	ROUTED TO						
+	B3039	12.	14.25	6.	2.	2.	.13
	3 COMBINED AT						
+	C3041	319.	12.75	112.	38.	31.	26.25
	ROUTED TO						
+	R3043	319.	12.75	111.	38.	31.	26.25
	HYDROGRAPH AT						
+	D3033	99.	12.75	21.	7.	6.	.27
	ROUTED TO						
+	R3045	80.	13.00	22.	7.	6.	.27
	HYDROGRAPH AT						
+	D1037	67.	12.25	14.	4.	4.	.43
	ROUTED TO						
+	R3047	68.	12.50	15.	5.	4.	.43
	HYDROGRAPH AT						
+	D1043	22.	12.50	7.	2.	2.	.47
	ROUTED TO						
+	R3049	22.	13.00	7.	2.	2.	.47
	4 COMBINED AT						
+	C3051	405.	12.75	148.	51.	41.	26.25
	HYDROGRAPH AT						
+	D1049	33.	12.75	12.	4.	3.	.59
	ROUTED TO						
+	R3053	32.	12.75	12.	4.	3.	.59
	HYDROGRAPH AT						
+	D1055	89.	12.75	31.	10.	8.	.80

	ROUTED TO						
+		R3055	84.	13.00	31.	10.	8.	.80
	HYDROGRAPH AT						
+		S3060	484.	12.50	97.	30.	24.	.59
	4 COMBINED AT						
+		C3061	810.	12.50	271.	90.	73.	26.84
	DIVERSION TO						
+		D3063	405.	12.50	136.	45.	36.	26.84
	HYDROGRAPH AT						
+		DV3063	405.	12.50	136.	45.	36.	26.84
	ROUTED TO						
+		R3065	399.	12.75	137.	46.	37.	26.84
	HYDROGRAPH AT						
+		S3066	60.	12.50	14.	5.	4.	.10
	ROUTED TO						
+		B3067	0.	16.25	0.	0.	0.	.10
	DIVERSION TO						
+		D3069	0.	15.50	0.	0.	0.	.10
	HYDROGRAPH AT						
+		DV3069	0.	15.50	0.	0.	0.	.10
	ROUTED TO						
+		R3071	0.	21.50	0.	0.	0.	.10
	HYDROGRAPH AT						
+		S3074	372.	12.50	78.	24.	20.	.46
	ROUTED TO						
+		B3075	160.	13.00	41.	14.	11.	.46
	3 COMBINED AT						
+		C3077	399.	12.75	168.	57.	46.	27.41
	HYDROGRAPH AT						
+		D3063	405.	12.50	136.	45.	36.	26.84
	ROUTED TO						
+		R3079	393.	12.75	136.	45.	37.	26.84
	DIVERSION TO						
+		D3081	314.	12.75	109.	36.	29.	26.84
	HYDROGRAPH AT						
+		DV3081	79.	12.75	27.	9.	7.	26.84
	ROUTED TO						
+		R3083	75.	12.75	27.	9.	7.	26.84
	HYDROGRAPH AT						

+	S3084	59.	12.50	12.	4.	3.	.06
2 COMBINED AT							
+	C3085	104.	12.75	37.	12.	10.	26.91
DIVERSION TO							
+	D3087	21.	12.75	7.	2.	2.	26.91
HYDROGRAPH AT							
+	DV3087	83.	12.75	30.	10.	8.	26.91
ROUTED TO							
+	R3089	61.	13.50	28.	10.	8.	26.91
2 COMBINED AT							
+	C3091	432.	13.50	182.	63.	51.	54.31
DIVERSION TO							
+	D3093	216.	13.50	91.	31.	25.	54.31
HYDROGRAPH AT							
+	DV3093	216.	13.50	91.	31.	25.	54.31
ROUTED TO							
+	R3095	192.	13.50	90.	31.	25.	54.31
HYDROGRAPH AT							
+	D3069	0.	15.50	0.	0.	0.	.10
ROUTED TO							
+	R3097	0.	22.00	0.	0.	0.	.10
HYDROGRAPH AT							
+	S3100	340.	12.50	74.	23.	19.	.46
ROUTED TO							
+	B3101	148.	13.25	37.	13.	11.	.46
2 COMBINED AT							
+	EMF2	148.	13.25	37.	13.	11.	.46
ROUTED TO							
+	R3105	126.	13.50	38.	13.	11.	.46
HYDROGRAPH AT							
+	S3200	321.	12.25	69.	22.	18.	.36
ROUTED TO							
+	B3201	150.	13.00	34.	12.	9.	.36
3 COMBINED AT							
+	C3203	260.	13.50	134.	49.	40.	55.14
ROUTED TO							
+	R3205	241.	13.75	134.	49.	40.	55.14
HYDROGRAPH AT							
+	D1057	1.	12.25	1.	0.	0.	.12

	ROUTED TO						
+		R3207	1.	15.25	1.	0.	0.	.12
	HYDROGRAPH AT						
+		S3210	885.	12.50	171.	54.	43.	.83
	DIVERSION TO						
+		B3211	1.	10.25	1.	1.	1.	.83
	HYDROGRAPH AT						
+		B3211	884.	12.50	170.	53.	43.	.83
	2 COMBINED AT						
+		C3213	884.	12.50	171.	53.	43.	.83
	HYDROGRAPH AT						
+		D1067	1.	12.00	1.	1.	1.	.70
	ROUTED TO						
+		R3215	1.	12.50	1.	1.	1.	.70
	HYDROGRAPH AT						
+		D1073	1.	11.75	1.	1.	1.	.75
	ROUTED TO						
+		R3217	1.	12.50	1.	1.	1.	.75
	HYDROGRAPH AT						
+		D1131	1.	12.00	1.	1.	1.	3.22
	ROUTED TO						
+		R3219	1.	12.75	1.	1.	1.	3.22
	HYDROGRAPH AT						
+		S3220	106.	12.50	23.	7.	6.	.15
	4 COMBINED AT						
+		C3221	109.	12.50	26.	9.	8.	.15
	DIVERSION TO						
+		D3223	87.	12.50	21.	8.	6.	.15
	HYDROGRAPH AT						
+		DV3223	22.	12.50	5.	2.	2.	.15
	ROUTED TO						
+		R3225	22.	12.50	5.	2.	2.	.15
	2 COMBINED AT						
+		C3227	904.	12.50	176.	55.	44.	.98
	DIVERSION TO						
+		D3229	904.	12.50	176.	55.	44.	.98
	HYDROGRAPH AT						
+		DV3229	0.	.25	0.	0.	0.	.98
	HYDROGRAPH AT						
+		D3081	314.	12.75	109.	36.	29.	26.84

	ROUTED TO						
+	R3231	301.	13.00	109.	36.	29.	26.84
	DIVERSION TO						
+	D3233	301.	13.00	109.	36.	29.	26.84
	HYDROGRAPH AT						
+	DV3233	0.	.25	0.	0.	0.	26.84
	HYDROGRAPH AT						
+	D3087	21.	12.75	7.	2.	2.	26.91
	ROUTED TO						
+	R3235	21.	13.00	8.	2.	2.	26.91
	HYDROGRAPH AT						
+	S3240	313.	12.25	55.	17.	14.	.25
	4 COMBINED AT						
+	C3241	284.	12.25	57.	18.	14.	28.07
	ROUTED TO						
+	R3243	270.	12.50	57.	18.	15.	28.07
	HYDROGRAPH AT						
+	D3093	216.	13.50	91.	31.	25.	54.31
	ROUTED TO						
+	R3247	187.	13.50	89.	31.	25.	54.31
	HYDROGRAPH AT						
+	S3250	292.	12.25	58.	18.	15.	.25
	3 COMBINED AT						
+	C3251	589.	12.50	202.	68.	55.	28.32
	DIVERSION TO						
+	D3253	354.	12.50	121.	41.	33.	28.32
	HYDROGRAPH AT						
+	DV3253	236.	12.50	81.	27.	22.	28.32
	ROUTED TO						
+	R3255	222.	12.75	81.	27.	22.	28.32
	HYDROGRAPH AT						
+	S3260	166.	12.50	36.	11.	9.	.24
	3 COMBINED AT						
+	EMF3	415.	12.75	226.	82.	66.	83.70
	ROUTED TO						
+	R3263	420.	13.00	228.	83.	67.	83.70
	HYDROGRAPH AT						
+	D3229	904.	12.50	176.	55.	44.	.98
	HYDROGRAPH AT						

+	D3233	301.	13.00	109.	36.	29.	26.84
2 COMBINED AT							
+	C3265	1218.	12.50	321.	104.	84.	.00
ROUTED TO							
+	R3267	1175.	12.50	322.	104.	84.	.00
HYDROGRAPH AT							
+	S3270	105.	12.50	22.	7.	6.	.16
2 COMBINED AT							
+	C3271	1230.	12.50	327.	105.	85.	.17
ROUTED TO							
+	R3273	1148.	12.50	328.	106.	85.	.17
HYDROGRAPH AT							
+	D3253	354.	12.50	121.	41.	33.	28.32
ROUTED TO							
+	R3275	339.	12.75	122.	41.	33.	28.32
HYDROGRAPH AT							
+	S3280	223.	12.50	47.	15.	12.	.21
3 COMBINED AT							
+	C3281	1705.	12.50	511.	166.	134.	.37
HYDROGRAPH AT							
+	S3284	205.	12.50	48.	15.	13.	.20
3 COMBINED AT							
+	EMF4	1617.	12.75	671.	231.	187.	84.27
HYDROGRAPH AT							
+	S3288	83.	12.25	15.	5.	4.	.08
2 COMBINED AT							
+	C3289	1649.	12.75	683.	235.	190.	84.35
ROUTED TO							
+	R3291	1622.	13.00	689.	237.	191.	84.35
HYDROGRAPH AT							
+	S3294	187.	12.50	37.	12.	9.	.19
ROUTED TO							
+	R3295	186.	12.50	38.	12.	9.	.19
HYDROGRAPH AT							
+	D2419	842.	12.50	341.	114.	92.	25.22
ROUTED TO							
+	R3297	818.	12.50	342.	114.	92.	25.22
HYDROGRAPH AT							
+	S3300	285.	12.25	51.	16.	13.	.25

	3 COMBINED AT						
+		C3301	1337.	12.50	481.	158.	127.	.44
	ROUTED TO						
+		R3303	1316.	12.50	481.	158.	127.	.44
	HYDROGRAPH AT						
+		D3223	87.	12.50	21.	8.	6.	.15
	ROUTED TO						
+		R3305	86.	12.50	22.	8.	6.	.15
	HYDROGRAPH AT						
+		S3310	239.	12.25	44.	14.	11.	.20
	2 COMBINED AT						
+		C3311	290.	12.50	64.	21.	17.	.20
	ROUTED TO						
+		R3313	288.	12.50	65.	21.	17.	.20
	HYDROGRAPH AT						
+		S3316	165.	12.25	26.	8.	7.	.14
	3 COMBINED AT						
+		C3317	1684.	12.50	566.	186.	150.	.78
	ROUTED TO						
+		R3319	1662.	12.50	566.	186.	150.	.78
	HYDROGRAPH AT						
+		S3320	150.	12.25	26.	8.	7.	.13
	2 COMBINED AT						
+		C3321	1771.	12.50	590.	194.	156.	.90
	ROUTED TO						
+		R3323	1750.	12.50	590.	194.	156.	.90
	HYDROGRAPH AT						
+		S3326	198.	12.25	33.	10.	8.	.15
	DIVERSION TO						
+		D3327	198.	12.25	32.	9.	7.	.15
	HYDROGRAPH AT						
+		DV3327	5.	16.00	3.	1.	1.	.15
	ROUTED TO						
+		R3328	5.	16.25	3.	1.	1.	.15
	HYDROGRAPH AT						
+		S3330	205.	12.25	34.	11.	9.	.14
	3 COMBINED AT						
+		C3331	1888.	12.50	622.	205.	165.	1.19
	ROUTED TO						
+		R3333	1870.	12.50	622.	205.	166.	1.19

	HYDROGRAPH AT						
+		D3327	198.	12.25	32.	9.	7.	.15
	ROUTED TO						
+		R3335	169.	12.50	33.	9.	7.	.15
	HYDROGRAPH AT						
+		S3340	103.	12.50	21.	6.	5.	.12
	3 COMBINED AT						
+		C3341	2135.	12.50	673.	220.	178.	1.30
	ROUTED TO						
+		R3343	2117.	12.50	673.	220.	178.	1.30
	HYDROGRAPH AT						
+		S3346	165.	12.50	36.	12.	9.	.18
	3 COMBINED AT						
+		EMF5	3186.	12.50	1259.	427.	344.	85.84
	DIVERSION TO						
+		D3349	3186.	12.50	1259.	427.	344.	85.84
	HYDROGRAPH AT						
+		DV3349	0.	.25	0.	0.	0.	85.84
	HYDROGRAPH AT						
+		D2030	2782.	13.50	744.	219.	177.	5.45
	DIVERSION TO						
+		D4001	2504.	13.50	670.	197.	159.	5.45
	HYDROGRAPH AT						
+		DV4001	278.	13.50	74.	22.	18.	5.45
	ROUTED TO						
+		R4003	274.	13.50	75.	22.	18.	5.45
	HYDROGRAPH AT						
+		S4004	19.	12.50	5.	1.	1.	.04
	2 COMBINED AT						
+		C4005	279.	13.50	79.	23.	19.	5.49
	DIVERSION TO						
+		D4007	140.	13.50	39.	12.	9.	5.49
	HYDROGRAPH AT						
+		DV4007	140.	13.50	39.	12.	9.	5.49
	ROUTED TO						
+		R4009	135.	13.75	40.	12.	9.	5.49
	HYDROGRAPH AT						
+		S4010	146.	12.50	28.	9.	7.	.15
	2 COMBINED AT						

+		C4011	158.	12.50	66.	20.	16.	5.64
	DIVERSION TO							
+		D4013	39.	12.50	17.	5.	4.	5.64
	HYDROGRAPH AT							
+		DV4013	118.	12.50	50.	15.	12.	5.64
	ROUTED TO							
+		R4015	117.	13.75	50.	15.	12.	5.64
	HYDROGRAPH AT							
+		D4013	39.	12.50	17.	5.	4.	5.64
	ROUTED TO							
+		R4017	39.	13.75	17.	5.	4.	5.64
	HYDROGRAPH AT							
+		S4020	85.	12.50	21.	7.	6.	.18
	3 COMBINED AT							
+		C4021	219.	12.50	87.	27.	22.	5.82
	ROUTED TO							
+		R4023	208.	12.75	89.	27.	22.	5.82
	HYDROGRAPH AT							
+		S4024	46.	12.75	15.	5.	4.	.13
	2 COMBINED AT							
+		C4025	250.	12.75	103.	32.	26.	5.95
	ROUTED TO							
+		R4027	245.	13.00	104.	33.	26.	5.95
	HYDROGRAPH AT							
+		S4028	107.	12.25	18.	6.	5.	.12
	ROUTED TO							
+		R4029	86.	12.75	19.	6.	5.	.12
	HYDROGRAPH AT							
+		S4030	43.	12.50	12.	4.	3.	.09
	ROUTED TO							
+		R4031	42.	12.75	13.	4.	3.	.09
	HYDROGRAPH AT							
+		S4034	232.	12.50	53.	17.	13.	.31
	4 COMBINED AT							
+		C4035	505.	12.50	184.	58.	47.	6.47
	DIVERSION TO							
+		D4037	505.	12.50	184.	58.	47.	6.47
	HYDROGRAPH AT							
+		DV4037	0.	.25	0.	0.	0.	6.47

	HYDROGRAPH AT						
+		S4040	32.	12.75	11.	4.	3.	.09
	DIVERSION TO						
+		D4041	32.	12.75	11.	4.	3.	.09
	HYDROGRAPH AT						
+		DV4041	0.	.25	0.	0.	0.	.09
	HYDROGRAPH AT						
+		D4001	2504.	13.50	670.	197.	159.	5.45
	ROUTED TO						
+		R4043	2477.	13.50	671.	198.	160.	5.45
	HYDROGRAPH AT						
+		S4044	65.	12.50	17.	5.	4.	.09
	2 COMBINED AT						
+		C4045	2505.	13.50	693.	205.	165.	.09
	ROUTED TO						
+		R4047	2462.	13.50	694.	205.	166.	.09
	HYDROGRAPH AT						
+		D2039	207.	13.00	94.	32.	26.	5.79
	ROUTED TO						
+		R4049	206.	13.00	94.	32.	26.	5.79
	HYDROGRAPH AT						
+		S4050	30.	12.25	5.	2.	1.	.04
	2 COMBINED AT						
+		C4051	236.	13.00	106.	35.	29.	.04
	ROUTED TO						
+		R4053	229.	13.00	105.	35.	28.	.04
	HYDROGRAPH AT						
+		D2043	51.	12.25	7.	2.	2.	5.83
	ROUTED TO						
+		R4055	44.	12.50	8.	2.	2.	5.83
	HYDROGRAPH AT						
+		D2063	116.	12.75	41.	14.	11.	5.99
	ROUTED TO						
+		R4057	113.	13.00	41.	14.	11.	5.99
	HYDROGRAPH AT						
+		S4060	124.	12.50	36.	11.	9.	.21
	5 COMBINED AT						
+		C4061	2792.	13.50	879.	267.	215.	.33
	HYDROGRAPH AT						
+		D2076	243.	12.75	80.	26.	21.	6.46

	ROUTED TO						
+		R4063	235.	12.75	79.	26.	21.	6.46
	2 COMBINED AT						
+		C4065	2943.	13.50	961.	293.	237.	.33
	ROUTED TO						
+		R4067	2895.	13.50	961.	294.	237.	.33
	HYDROGRAPH AT						
+		S4068	114.	12.25	24.	8.	6.	.14
	ROUTED TO						
+		R4069	111.	12.50	24.	8.	6.	.14
	HYDROGRAPH AT						
+		D2095	446.	12.50	145.	47.	38.	6.98
	ROUTED TO						
+		R4071	430.	12.75	146.	47.	38.	6.98
	HYDROGRAPH AT						
+		S4074	106.	12.50	22.	7.	5.	.12
	2 COMBINED AT						
+		C4075	518.	12.50	175.	56.	45.	.12
	DIVERSION TO						
+		D4077	155.	12.50	52.	17.	14.	.12
	HYDROGRAPH AT						
+		DV4077	363.	12.50	122.	39.	32.	.12
	ROUTED TO						
+		R4079	356.	12.75	123.	39.	32.	.12
	HYDROGRAPH AT						
+		S4080	52.	12.50	13.	4.	3.	.11
	4 COMBINED AT						
+		C4081	3134.	13.50	1113.	343.	276.	.70
	DIVERSION TO						
+		D4083	940.	13.50	334.	103.	83.	.70
	HYDROGRAPH AT						
+		DV4083	2194.	13.50	779.	240.	193.	.70
	ROUTED TO						
+		R4085	2153.	13.50	778.	240.	194.	.70
	DIVERSION TO						
+		D4087	646.	13.50	234.	72.	58.	.70
	HYDROGRAPH AT						
+		DV4087	1507.	13.50	545.	168.	136.	.70
	ROUTED TO						

+		R4089	1493.	13.75	546.	169.	136.	.70	
	HYDROGRAPH AT								
+		S4090	77.	12.50	24.	8.	6.	.21	
	2 COMBINED AT								
+		C4091	1520.	13.75	568.	176.	142.	.91	
	ROUTED TO								
+		B4093	1410.	14.00	566.	175.	141.	.91	
+									73.93 14.00
	ROUTED TO								
+		R4095	1409.	14.00	566.	175.	141.	.91	
	HYDROGRAPH AT								
+		S4100	45.	12.50	11.	4.	3.	.10	
	HYDROGRAPH AT								
+		S4102	80.	12.00	13.	4.	3.	.07	
	3 COMBINED AT								
+		C4103	1424.	14.00	582.	183.	147.	1.08	
	ROUTED TO								
+		B4105	346.	15.50	324.	168.	135.	1.08	
+									55.23 15.50
	DIVERSION TO								
+		D4107	346.	15.50	324.	168.	135.	1.08	
	HYDROGRAPH AT								
+		DV4107	0.	.25	0.	0.	0.	1.08	
	HYDROGRAPH AT								
+		S4110	29.	12.50	7.	2.	2.	.06	
	4 COMBINED AT								
+		C4111	26.	12.50	7.	2.	2.	7.70	
	DIVERSION TO								
+		D4113	26.	12.50	7.	2.	2.	7.70	
	HYDROGRAPH AT								
+		DV4113	0.	.25	0.	0.	0.	7.70	
	HYDROGRAPH AT								
+		S4114	143.	12.25	26.	8.	6.	.15	
	HYDROGRAPH AT								
+		D4077	155.	12.50	52.	17.	14.	.12	
	ROUTED TO								
+		R4115	154.	12.75	53.	17.	14.	.12	
	2 COMBINED AT								
+		C4117	253.	12.50	78.	25.	20.	.15	
	ROUTED TO								

+		R4119	244.	12.50	78.	25.	20.	.15	
	HYDROGRAPH AT								
+		S4120	71.	12.25	12.	4.	3.	.08	
	ROUTED TO								
+		R4121	65.	12.50	12.	4.	3.	.08	
	HYDROGRAPH AT								
+		D4087	646.	13.50	234.	72.	58.	.70	
	ROUTED TO								
+		R4123	639.	13.50	233.	72.	58.	.70	
	HYDROGRAPH AT								
+		S4126	107.	12.25	21.	7.	5.	.15	
	4 COMBINED AT								
+		C4127	799.	13.50	344.	108.	87.	.38	
	ROUTED TO								
+		B4129	795.	13.50	344.	108.	87.	.38	
+									68.74 13.50
	ROUTED TO								
+		R4131	795.	13.50	344.	108.	87.	.38	
	HYDROGRAPH AT								
+		S4132	128.	12.50	25.	8.	6.	.13	
	HYDROGRAPH AT								
+		D2112	236.	12.50	76.	25.	20.	7.34	
	DIVERSION TO								
+		D4133	165.	12.50	53.	17.	14.	7.34	
	HYDROGRAPH AT								
+		DV4133	71.	12.50	23.	7.	6.	7.34	
	ROUTED TO								
+		R4135	68.	12.75	23.	7.	6.	7.34	
	DIVERSION TO								
+		D4137	27.	12.75	9.	3.	2.	7.34	
	HYDROGRAPH AT								
+		DV4137	41.	12.75	14.	4.	4.	7.34	
	ROUTED TO								
+		R4139	41.	12.75	14.	4.	4.	7.34	
	2 COMBINED AT								
+		C4141	160.	12.50	38.	12.	10.	7.47	
	ROUTED TO								
+		R4143	148.	12.50	38.	12.	10.	7.47	
	HYDROGRAPH AT								
+		D4133	165.	12.50	53.	17.	14.	7.34	

	ROUTED TO								
+		R4145	163.	12.75	54.	17.	14.	7.34	
	HYDROGRAPH AT								
+		D2131	509.	12.50	154.	50.	40.	7.76	
	ROUTED TO								
+		R4147	481.	12.50	154.	50.	40.	7.76	
	HYDROGRAPH AT								
+		S4150	174.	12.25	35.	11.	9.	.27	
	3 COMBINED AT								
+		C4151	820.	12.50	253.	81.	66.	.27	
	DIVERSION TO								
+		D4153	164.	12.50	51.	16.	13.	.27	
	HYDROGRAPH AT								
+		DV4153	656.	12.50	202.	65.	53.	.27	
	ROUTED TO								
+		R4155	637.	12.50	202.	65.	53.	.27	
	HYDROGRAPH AT								
+		S4156	216.	12.25	34.	11.	9.	.14	
	HYDROGRAPH AT								
+		D4137	27.	12.75	9.	3.	2.	7.34	
	ROUTED TO								
+		R4158	26.	13.00	10.	3.	2.	7.34	
	4 COMBINED AT								
+		C4159	877.	12.50	271.	88.	71.	7.88	
	DIVERSION TO								
+		D4161	351.	12.50	108.	35.	28.	7.88	
	HYDROGRAPH AT								
+		DV4161	526.	12.50	163.	53.	42.	7.88	
	ROUTED TO								
+		R4163	495.	12.50	162.	53.	43.	7.88	
	HYDROGRAPH AT								
+		S4166	87.	12.25	17.	5.	4.	.12	
	2 COMBINED AT								
+		C4167	569.	12.50	178.	58.	46.	8.00	
	ROUTED TO								
+		B4169	498.	12.75	177.	58.	46.	8.00	
+									64.21 13.00
	ROUTED TO								
+		R4171	497.	12.75	177.	58.	46.	8.00	

	HYDROGRAPH AT								
+		D4153	164.	12.50	51.	16.	13.	.27	
	ROUTED TO								
+		R4173	159.	12.50	51.	16.	13.	.27	
	HYDROGRAPH AT								
+		D4161	351.	12.50	108.	35.	28.	7.88	
	ROUTED TO								
+		R4175	335.	12.50	108.	35.	28.	7.88	
	HYDROGRAPH AT								
+		S4178	172.	12.50	34.	11.	9.	.25	
	3 COMBINED AT								
+		C4179	686.	12.50	198.	64.	52.	.25	
	ROUTED TO								
+		B4181	591.	12.75	197.	64.	52.	.25	
+									64.35 12.75
	ROUTED TO								
+		R4183	590.	12.75	197.	64.	52.	.25	
	4 COMBINED AT								
+		C4185	1558.	12.75	674.	216.	174.	16.34	
	HYDROGRAPH AT								
+		S4186	241.	12.00	40.	13.	10.	.22	
	2 COMBINED AT								
+		C4187	1601.	12.75	703.	227.	183.	16.56	
	ROUTED TO								
+		B4189	382.	15.50	370.	225.	181.	16.56	
+									43.12 15.50
	ROUTED TO								
+		R4191	382.	15.75	370.	224.	181.	16.56	
	HYDROGRAPH AT								
+		S4194	26.	12.75	10.	3.	3.	.09	
	HYDROGRAPH AT								
+		S4196	63.	12.75	24.	8.	6.	.21	
	3 COMBINED AT								
+		C4197	404.	15.00	388.	234.	189.	16.86	
	DIVERSION TO								
+		D4199	404.	15.00	388.	234.	189.	16.86	
	HYDROGRAPH AT								
+		DV4199	0.	.25	0.	0.	0.	16.86	
	HYDROGRAPH AT								
+		S4200	53.	12.75	18.	6.	5.	.15	

	HYDROGRAPH AT						
+		S4202	64.	12.75	21.	7.	6.	.18
	3 COMBINED AT						
+		C4203	98.	12.75	35.	11.	9.	17.20
	ROUTED TO						
+		R4205	98.	12.75	35.	11.	9.	17.20
	HYDROGRAPH AT						
+		D2157	3.	12.50	1.	0.	0.	8.28
	ROUTED TO						
+		R4207	3.	12.50	1.	0.	0.	8.28
	HYDROGRAPH AT						
+		S4210	107.	12.50	21.	7.	5.	.16
	2 COMBINED AT						
+		C4211	109.	12.50	22.	7.	6.	.16
	DIVERSION TO						
+		B4213	1.	12.00	1.	0.	0.	.16
	HYDROGRAPH AT						
+		B4213	108.	12.50	21.	7.	5.	.16
	ROUTED TO						
+		R4215	103.	12.75	22.	7.	6.	.16
	HYDROGRAPH AT						
+		S4216	71.	12.75	26.	9.	7.	.22
	2 COMBINED AT						
+		C4217	172.	12.75	47.	15.	12.	.38
	ROUTED TO						
+		R4219	164.	12.75	47.	15.	12.	.38
	HYDROGRAPH AT						
+		S4220	35.	12.75	12.	4.	3.	.10
	3 COMBINED AT						
+		C4221	269.	12.75	87.	29.	23.	17.68
	ROUTED TO						
+		R4223	256.	13.00	87.	29.	23.	17.68
	HYDROGRAPH AT						
+		S4224	44.	12.25	8.	2.	2.	.06
	ROUTED TO						
+		R4225	38.	12.50	8.	2.	2.	.06
	HYDROGRAPH AT						
+		S4226	52.	12.75	20.	7.	5.	.18
	HYDROGRAPH AT						
+		D2167	423.	12.75	161.	53.	43.	8.37

	DIVERSION TO						
+		D4227	1.	11.25	1.	1.	0.	8.37
	HYDROGRAPH AT						
+		B4227	422.	12.75	160.	53.	43.	8.37
	ROUTED TO						
+		R4229	421.	12.75	160.	53.	43.	8.37
	HYDROGRAPH AT						
+		S4230	82.	12.75	30.	10.	8.	.26
	HYDROGRAPH AT						
+		D2195	581.	13.00	224.	74.	60.	8.98
	ROUTED TO						
+		R4231	575.	13.00	224.	74.	60.	8.98
	HYDROGRAPH AT						
+		D2213	75.	13.00	38.	13.	10.	9.23
	ROUTED TO						
+		R4233	74.	13.25	38.	13.	10.	9.23
	HYDROGRAPH AT						
+		S4236	121.	12.50	34.	11.	9.	.29
	3 COMBINED AT						
+		C4237	759.	13.00	305.	101.	82.	.29
	DIVERSION TO						
+		D4239	152.	13.00	61.	20.	16.	.29
	HYDROGRAPH AT						
+		DV4239	607.	13.00	244.	81.	65.	.29
	ROUTED TO						
+		R4241	603.	13.00	245.	81.	65.	.29
	HYDROGRAPH AT						
+		S4244	22.	12.50	4.	1.	1.	.04
	2 COMBINED AT						
+		C4245	608.	13.00	248.	82.	66.	.33
	DIVERSION TO						
+		D4247	182.	13.00	74.	25.	20.	.33
	HYDROGRAPH AT						
+		DV4247	426.	13.00	174.	58.	46.	.33
	ROUTED TO						
+		R4249	425.	13.00	174.	58.	46.	.33
	3 COMBINED AT						
+		C4251	887.	13.00	354.	118.	95.	8.96
	ROUTED TO						

+	R4253	881.	13.00	355.	118.	95.	8.96
4 COMBINED AT +	C4255	1064.	13.00	434.	145.	117.	26.87
HYDROGRAPH AT +	D4239	152.	13.00	61.	20.	16.	.29
HYDROGRAPH AT +	S4256	69.	12.25	12.	4.	3.	.08
2 COMBINED AT +	C4257	172.	13.00	74.	24.	20.	.08
ROUTED TO +	R4259	172.	13.00	74.	24.	20.	.08
HYDROGRAPH AT +	S4260	123.	12.25	20.	6.	5.	.12
HYDROGRAPH AT +	S4262	203.	12.25	33.	10.	8.	.18
DIVERSION TO +	D4263	41.	12.25	7.	2.	2.	.18
HYDROGRAPH AT +	DV4263	163.	12.25	27.	8.	7.	.18
ROUTED TO +	R4265	148.	12.50	27.	8.	7.	.18
DIVERSION TO +	D4267	22.	12.50	4.	1.	1.	.18
HYDROGRAPH AT +	DV4267	126.	12.50	23.	7.	6.	.18
HYDROGRAPH AT +	D4247	182.	13.00	74.	25.	20.	.33
ROUTED TO +	R4269	180.	13.00	74.	25.	20.	.33
HYDROGRAPH AT +	S4270	67.	12.25	11.	3.	3.	.07
2 COMBINED AT +	C4271	198.	13.00	86.	29.	23.	.07
4 COMBINED AT +	C4273	484.	12.50	197.	65.	52.	.45
ROUTED TO +	R4275	472.	12.75	196.	65.	52.	.45
HYDROGRAPH AT +	D2251	51.	12.25	9.	3.	2.	.10

	ROUTED TO						
+	R4277	40.	12.75	9.	3.	2.	.10
	HYDROGRAPH AT						
+	D2257	29.	12.50	3.	1.	1.	10.10
	ROUTED TO						
+	R4279	22.	12.50	3.	1.	1.	10.10
	HYDROGRAPH AT						
+	S4280	117.	12.25	21.	7.	5.	.13
	3 COMBINED AT						
+	C4281	160.	12.50	36.	11.	9.	.13
	ROUTED TO						
+	R4283	157.	12.50	36.	11.	9.	.13
	DIVERSION TO						
+	D4285	157.	12.50	36.	11.	9.	.13
	HYDROGRAPH AT						
+	DV4285	0.	.25	0.	0.	0.	.13
	HYDROGRAPH AT						
+	S4288	140.	12.25	25.	8.	6.	.13
	HYDROGRAPH AT						
+	D4263	41.	12.25	7.	2.	2.	.18
	ROUTED TO						
+	R4289	35.	12.50	7.	2.	2.	.18
	3 COMBINED AT						
+	C4291	166.	12.25	31.	10.	8.	.26
	DIVERSION TO						
+	D4293	83.	12.25	16.	5.	4.	.26
	HYDROGRAPH AT						
+	DV4293	83.	12.25	16.	5.	4.	.26
	ROUTED TO						
+	R4295	77.	12.50	16.	5.	4.	.26
	HYDROGRAPH AT						
+	S4296	135.	12.25	23.	7.	6.	.12
	2 COMBINED AT						
+	C4297	196.	12.25	39.	12.	10.	.38
	DIVERSION TO						
+	D4299	39.	12.25	8.	2.	2.	.38
	HYDROGRAPH AT						
+	DV4299	157.	12.25	31.	10.	8.	.38
	ROUTED TO						
+	R4301	146.	12.50	31.	10.	8.	.38

	HYDROGRAPH AT								
+		D4267	22.	12.50	4.	1.	1.	.18	
	ROUTED TO								
+		R4303	23.	13.00	5.	1.	1.	.18	
	HYDROGRAPH AT								
+		S4304	153.	12.25	26.	8.	7.	.12	
	3 COMBINED AT								
+		C4305	280.	12.25	61.	19.	15.	.50	
	ROUTED TO								
+		R4307	265.	12.50	62.	19.	16.	.50	
	HYDROGRAPH AT								
+		S4310	186.	12.50	46.	15.	12.	.40	
	4 COMBINED AT								
+		C4311	1674.	12.75	697.	232.	187.	28.23	
	ROUTED TO								
+		B4313	51.	27.00	51.	33.	27.	28.23	
+									66.56 27.00
	ROUTED TO								
+		R4315	51.	27.25	51.	33.	27.	28.23	
	HYDROGRAPH AT								
+		D4299	39.	12.25	8.	2.	2.	.38	
	ROUTED TO								
+		R4317	38.	12.50	8.	3.	2.	.38	
	HYDROGRAPH AT								
+		S4320	41.	12.25	7.	2.	2.	.05	
	2 COMBINED AT								
+		C4321	72.	12.50	16.	5.	4.	.05	
	ROUTED TO								
+		R4323	70.	12.50	16.	5.	4.	.05	
	HYDROGRAPH AT								
+		S4324	93.	12.25	18.	5.	4.	.12	
	3 COMBINED AT								
+		C4325	144.	12.50	65.	42.	34.	28.39	
	ROUTED TO								
+		R4327	131.	12.50	64.	42.	34.	28.39	
	HYDROGRAPH AT								
+		S4330	84.	12.25	15.	5.	4.	.10	
	DIVERSION TO								
+		D4331	8.	12.25	1.	0.	0.	.10	

	HYDROGRAPH AT							
+		DV4331	76.	12.25	13.	4.	3.	.10
	ROUTED TO							
+		R4333	71.	12.50	14.	4.	3.	.10
	HYDROGRAPH AT							
+		D4331	8.	12.25	1.	0.	0.	.10
	ROUTED TO							
+		R4335	7.	12.50	1.	0.	0.	.10
	HYDROGRAPH AT							
+		S4338	59.	12.25	10.	3.	3.	.07
	2 COMBINED AT							
+		C4339	66.	12.25	12.	4.	3.	.07
	DIVERSION TO							
+		D4341	33.	12.25	6.	2.	1.	.07
	HYDROGRAPH AT							
+		DV4341	33.	12.25	6.	2.	1.	.07
	ROUTED TO							
+		R4343	32.	12.50	6.	2.	2.	.07
	HYDROGRAPH AT							
+		D4341	33.	12.25	6.	2.	1.	.07
	ROUTED TO							
+		R4345	29.	12.25	6.	2.	1.	.07
	HYDROGRAPH AT							
+		S4347	165.	12.25	26.	8.	7.	.13
	HYDROGRAPH AT							
+		D4285	157.	12.50	36.	11.	9.	.13
	ROUTED TO							
+		R4349	149.	12.50	36.	11.	9.	.13
	HYDROGRAPH AT							
+		D4293	83.	12.25	16.	5.	4.	.26
	ROUTED TO							
+		R4351	77.	12.50	16.	5.	4.	.26
	3 COMBINED AT							
+		C4353	330.	12.50	78.	24.	19.	.13
	ROUTED TO							
+		R4355	329.	12.50	78.	24.	19.	.13
	HYDROGRAPH AT							
+		S4356	62.	12.25	11.	3.	3.	.09
	3 COMBINED AT							
+		C4357	402.	12.50	94.	29.	23.	.22

	DIVERSION TO						
+		D4359	20.	12.50	5.	1.	1.	.22
	HYDROGRAPH AT						
+		DV4359	382.	12.50	89.	28.	22.	.22
	ROUTED TO						
+		R4361	356.	12.50	90.	28.	22.	.22
	HYDROGRAPH AT						
+		S4364	110.	12.25	22.	7.	6.	.18
	DIVERSION TO						
+		D4365	88.	12.25	18.	6.	4.	.18
	HYDROGRAPH AT						
+		DV4365	22.	12.25	4.	1.	1.	.18
	ROUTED TO						
+		R4367	25.	12.50	5.	1.	1.	.18
	HYDROGRAPH AT						
+		D2293	458.	12.50	70.	17.	14.	10.87
	ROUTED TO						
+		R4369	426.	12.75	71.	18.	14.	10.87
	HYDROGRAPH AT						
+		D2317	324.	12.75	62.	15.	12.	11.18
	ROUTED TO						
+		R4371	317.	12.75	62.	16.	13.	11.18
	2 COMBINED AT						
+		C4373	976.	12.75	183.	46.	37.	.00
	HYDROGRAPH AT						
+		D2327	911.	12.50	545.	196.	158.	11.27
	ROUTED TO						
+		R4375	908.	12.75	545.	196.	158.	11.27
	HYDROGRAPH AT						
+		S4376	428.	12.25	83.	26.	21.	.53
	4 COMBINED AT						
+		C4377	1989.	12.50	792.	266.	214.	.71
	ROUTED TO						
+		R4379	1982.	12.75	790.	265.	214.	.71
	HYDROGRAPH AT						
+		D4365	88.	12.25	18.	6.	4.	.18
	ROUTED TO						
+		R4381	87.	12.50	19.	6.	5.	.18
	HYDROGRAPH AT						

+	D4359	20.	12.50	5.	1.	1.	.22
HYDROGRAPH AT							
+	S4384	148.	12.25	28.	9.	7.	.20
4 COMBINED AT							
+	C4385	2134.	12.75	837.	280.	226.	.91
DIVERSION TO							
+	D4387	1067.	12.75	419.	140.	113.	.91
HYDROGRAPH AT							
+	DV4387	1067.	12.75	419.	140.	113.	.91
ROUTED TO							
+	R4389	1067.	12.75	419.	140.	113.	.91
4 COMBINED AT							
+	C4391	1460.	12.75	523.	172.	139.	1.30
ROUTED TO							
+	R4393	1459.	12.75	523.	173.	139.	1.30
HYDROGRAPH AT							
+	S4394	286.	12.25	58.	18.	14.	.33
3 COMBINED AT							
+	C4395	1533.	12.75	577.	211.	171.	30.02
ROUTED TO							
+	R4397	1528.	12.75	571.	210.	170.	30.02
HYDROGRAPH AT							
+	S4400	312.	12.50	61.	19.	15.	.36
HYDROGRAPH AT							
+	D4387	1067.	12.75	419.	140.	113.	.91
ROUTED TO							
+	R4401	1055.	12.75	418.	140.	113.	.91
2 COMBINED AT							
+	C4403	1251.	12.75	483.	161.	130.	.36
ROUTED TO							
+	R4405	1248.	12.75	482.	161.	130.	.36
HYDROGRAPH AT							
+	S4406	333.	12.25	59.	18.	15.	.31
3 COMBINED AT							
+	C4407	2700.	12.75	1041.	368.	297.	30.69
DIVERSION TO							
+	D4409	2700.	12.75	1041.	368.	297.	30.69
HYDROGRAPH AT							
+	DV4409	0.	.25	0.	0.	0.	30.69

	HYDROGRAPH AT								
+		S4410	148.	12.25	24.	7.	6.	.15	
	ROUTED TO								
+		B4411	46.	13.00	12.	4.	3.	.15	
+									2.52 13.50
	ROUTED TO								
+		R4413	44.	13.00	12.	4.	3.	.15	
	HYDROGRAPH AT								
+		S4414	126.	12.25	20.	6.	5.	.12	
	ROUTED TO								
+		B4415	50.	12.75	10.	3.	3.	.12	
+									1.52 13.50
	ROUTED TO								
+		R4417	42.	12.75	10.	3.	3.	.12	
	HYDROGRAPH AT								
+		S4420	184.	12.50	37.	12.	9.	.27	
	3 COMBINED AT								
+		C4421	181.	12.50	57.	19.	15.	.54	
	ROUTED TO								
+		B4423	63.	14.25	27.	10.	8.	.54	
+									6.03 16.25
	HYDROGRAPH AT								
+		D2385	980.	12.25	320.	100.	81.	12.54	
	ROUTED TO								
+		R4425	946.	12.50	323.	101.	81.	12.54	
	2 COMBINED AT								
+		C4427	985.	12.50	360.	116.	94.	.54	
	ROUTED TO								
+		R4429	972.	12.50	360.	116.	94.	.54	
	HYDROGRAPH AT								
+		S4430	53.	12.25	8.	2.	2.	.04	
	2 COMBINED AT								
+		C4431	999.	12.50	367.	118.	96.	.58	
	DIVERSION TO								
+		D4433	999.	12.50	367.	118.	96.	.58	
	HYDROGRAPH AT								
+		DV4433	0.	12.50	0.	0.	0.	.58	
	ROUTED TO								
+		R4435	0.	14.00	0.	0.	0.	.58	
	HYDROGRAPH AT								
+		S4440	59.	12.25	10.	3.	3.	.05	

	2 COMBINED AT								
+		C4441	58.	12.25	10.	3.	2.	.63	
	ROUTED TO								
+		R4443	46.	12.50	10.	3.	3.	.63	
	HYDROGRAPH AT								
+		S4446	103.	12.25	18.	5.	4.	.09	
	3 COMBINED AT								
+		C4447	115.	12.25	25.	8.	6.	31.42	
	DIVERSION TO								
+		D4449	0.	.25	0.	0.	0.	31.42	
	HYDROGRAPH AT								
+		DV4449	115.	12.25	25.	8.	6.	31.42	
	ROUTED TO								
+		R4451	112.	12.50	25.	8.	6.	31.42	
	HYDROGRAPH AT								
+		D4433	999.	12.50	367.	118.	96.	.58	
	ROUTED TO								
+		R4453	964.	12.50	368.	119.	96.	.58	
	HYDROGRAPH AT								
+		S4454	36.	12.50	7.	2.	2.	.06	
	2 COMBINED AT								
+		C4455	1023.	12.50	386.	125.	101.	.06	
	ROUTED TO								
+		R4457	974.	12.75	387.	125.	101.	.06	
	HYDROGRAPH AT								
+		S4460	64.	12.50	13.	4.	3.	.11	
	3 COMBINED AT								
+		C4461	1038.	12.50	387.	125.	101.	31.58	
	ROUTED TO								
+		R4463	983.	12.75	365.	118.	95.	31.58	
	HYDROGRAPH AT								
+		D2403	189.	12.25	12.	3.	2.	13.02	
	HYDROGRAPH AT								
+		S4466	31.	12.25	5.	1.	1.	.02	
	ROUTED TO								
+		B4467	1.	15.50	1.	0.	0.	.02	
+									2.00 22.50
	HYDROGRAPH AT								
+		S4470	68.	12.25	11.	3.	3.	.07	

	3 COMBINED AT								
+		C4471	356.	12.25	31.	9.	7.	.09	
	ROUTED TO								
+		R4473	283.	12.25	32.	9.	7.	.09	
	HYDROGRAPH AT								
+		S4474	170.	12.25	27.	8.	7.	.14	
	ROUTED TO								
+		B4475	0.	22.00	0.	0.	0.	.14	
+									2.04 29.75
	2 COMBINED AT								
+		C4477	283.	12.25	32.	9.	7.	.23	
	ROUTED TO								
+		R4479	252.	12.50	31.	9.	7.	.23	
	HYDROGRAPH AT								
+		S4480	118.	12.25	20.	6.	5.	.11	
	ROUTED TO								
+		R4481	100.	12.25	20.	6.	5.	.11	
	HYDROGRAPH AT								
+		S4484	38.	12.25	7.	2.	2.	.06	
	HYDROGRAPH AT								
+		S4486	13.	13.00	5.	2.	1.	.06	
	4 COMBINED AT								
+		C4487	375.	12.50	62.	19.	15.	.46	
	ROUTED TO								
+		R4489	358.	12.50	62.	19.	15.	.46	
	HYDROGRAPH AT								
+		S4490	65.	12.50	13.	4.	3.	.11	
	2 COMBINED AT								
+		C4491	418.	12.50	75.	23.	18.	.57	
	DIVERSION TO								
+		D4493	0.	.25	0.	0.	0.	.57	
	HYDROGRAPH AT								
+		DV4493	418.	12.50	75.	23.	18.	.57	
	2 COMBINED AT								
+		C4495	1210.	12.50	417.	135.	109.	32.16	
	ROUTED TO								
+		R4497	1190.	12.75	419.	135.	109.	32.16	
	HYDROGRAPH AT								
+		S4500	22.	12.50	7.	2.	2.	.04	
	ROUTED TO								

+		R4501	21.	12.50	7.	2.	2.	.04
	HYDROGRAPH AT							
+		S4504	159.	12.50	47.	15.	12.	.38
	2 COMBINED AT							
+		C4505	179.	12.50	53.	17.	14.	.43
	DIVERSION TO							
+		D4507	85.	12.50	26.	8.	7.	.43
	HYDROGRAPH AT							
+		DV4507	94.	12.50	27.	9.	7.	.43
	HYDROGRAPH AT							
+		H4510	145.	8.00	145.	124.	100.	.56
	2 COMBINED AT							
+		C4511	237.	12.50	160.	133.	107.	.99
	ROUTED TO							
+		R4513	231.	12.75	160.	131.	106.	.99
	HYDROGRAPH AT							
+		D3349	3186.	12.50	1259.	427.	344.	85.84
	ROUTED TO							
+		R4515	3161.	12.75	1237.	422.	340.	85.84
	2 COMBINED AT							
+		EMF6	4238.	13.00	1727.	653.	527.	.99
	DIVERSION TO							
+		D4519	4238.	13.00	1727.	653.	527.	.99
	HYDROGRAPH AT							
+		DV4519	0.	.25	0.	0.	0.	.99
	HYDROGRAPH AT							
+		D4507	85.	12.50	26.	8.	7.	.43
	ROUTED TO							
+		R4521	81.	12.75	26.	9.	7.	.43
	HYDROGRAPH AT							
+		S4524	91.	12.25	17.	5.	4.	.11
	ROUTED TO							
+		B4525	8.	14.75	8.	4.	3.	.11
	HYDROGRAPH AT							
+		S4526	55.	12.50	11.	3.	3.	.09
	5 COMBINED AT							
+		C4527	1281.	12.75	454.	149.	120.	33.34
	ROUTED TO							
+		R4529	1253.	12.75	453.	148.	120.	33.34

+	HYDROGRAPH AT S4530	235.	13.00	109.	37.	30.	1.00
+	HYDROGRAPH AT D4519	4238.	13.00	1727.	653.	527.	.99
+	ROUTED TO R4531	4212.	13.00	1730.	653.	527.	.99
+	4 COMBINED AT EMF7	4472.	13.00	1886.	717.	578.	120.19
+	ROUTED TO R4533	4443.	13.00	1884.	715.	577.	120.19
+	HYDROGRAPH AT S4534	73.	13.25	35.	12.	10.	.33
+	2 COMBINED AT C4535	4487.	13.00	1911.	724.	584.	120.51
+	HYDROGRAPH AT D4041	32.	12.75	11.	4.	3.	.09
+	ROUTED TO R4536	30.	12.75	11.	4.	3.	.09
+	DIVERSION TO D4537	15.	12.75	6.	2.	2.	.09
+	HYDROGRAPH AT DV4537	15.	12.75	6.	2.	2.	.09
+	ROUTED TO R4538	15.	13.00	6.	2.	2.	.09
+	HYDROGRAPH AT S4539	23.	13.00	10.	3.	3.	.09
+	2 COMBINED AT C4540	37.	13.00	16.	5.	4.	.18
+	DIVERSION TO D4541	19.	13.00	8.	3.	2.	.18
+	HYDROGRAPH AT DV4541	19.	13.00	8.	3.	2.	.18
+	HYDROGRAPH AT S4544	19.	12.75	6.	2.	2.	.05
+	DIVERSION TO D4545	10.	12.75	3.	1.	1.	.05
+	HYDROGRAPH AT DV4545	10.	12.75	3.	1.	1.	.05
+	HYDROGRAPH AT S4548	20.	12.75	7.	2.	2.	.06

	3 COMBINED AT						
+	C4549	46.	12.75	17.	6.	5.	.29
	ROUTED TO						
+	R4551	45.	13.00	17.	6.	5.	.29
	HYDROGRAPH AT						
+	S4554	109.	12.75	39.	13.	10.	.34
	2 COMBINED AT						
+	C4555	150.	12.75	55.	18.	15.	.62
	DIVERSION TO						
+	D4557	150.	12.75	55.	18.	15.	.62
	HYDROGRAPH AT						
+	DV4557	0.	.25	0.	0.	0.	.62
	HYDROGRAPH AT						
+	D4113	26.	12.50	7.	2.	2.	7.70
	ROUTED TO						
+	R4559	23.	12.50	7.	2.	2.	7.70
	HYDROGRAPH AT						
+	D4037	505.	12.50	184.	58.	47.	6.47
	ROUTED TO						
+	R4561	497.	12.75	185.	58.	47.	6.47
	HYDROGRAPH AT						
+	S4566	36.	13.25	18.	6.	5.	.15
	HYDROGRAPH AT						
+	S4568	114.	12.25	19.	6.	5.	.10
	4 COMBINED AT						
+	C4569	627.	12.75	235.	75.	60.	.25
	HYDROGRAPH AT						
+	S4570	40.	12.75	12.	4.	3.	.09
	HYDROGRAPH AT						
+	D4537	15.	12.75	6.	2.	2.	.09
	ROUTED TO						
+	R4573	15.	13.00	6.	2.	2.	.09
	2 COMBINED AT						
+	C4575	52.	12.75	18.	6.	5.	.09
	HYDROGRAPH AT						
+	D4541	19.	13.00	8.	3.	2.	.18
	ROUTED TO						
+	R4577	18.	13.25	8.	3.	2.	.18
	HYDROGRAPH AT						

+	D4545	10.	12.75	3.	1.	1.	.05
ROUTED TO +	R4579	9.	13.00	3.	1.	1.	.05
HYDROGRAPH AT +	S4580	36.	12.75	14.	5.	4.	.12
3 COMBINED AT +	C4581	59.	13.00	25.	8.	7.	.12
4 COMBINED AT +	C4583	714.	12.75	272.	87.	70.	1.08
DIVERSION TO +	D4585	714.	12.75	272.	87.	70.	1.08
HYDROGRAPH AT +	DV4585	0.	.25	0.	0.	0.	1.08
HYDROGRAPH AT +	S4588	45.	12.50	9.	3.	2.	.07
DIVERSION TO +	D4589	45.	12.50	9.	3.	2.	.07
HYDROGRAPH AT +	DV4589	0.	.25	0.	0.	0.	.07
HYDROGRAPH AT +	S4590	34.	12.75	13.	4.	3.	.11
DIVERSION TO +	D4591	34.	12.75	13.	4.	3.	.11
HYDROGRAPH AT +	DV4591	0.	.25	0.	0.	0.	.11
HYDROGRAPH AT +	D4557	150.	12.75	55.	18.	15.	.62
ROUTED TO +	R4593	142.	13.00	55.	18.	15.	.62
HYDROGRAPH AT +	S4596	94.	13.00	42.	14.	11.	.38
DIVERSION TO +	D4597	23.	13.00	10.	4.	3.	.38
HYDROGRAPH AT +	DV4597	70.	13.00	31.	11.	9.	.38
5 COMBINED AT +	C4599	208.	13.00	84.	29.	23.	1.64
DIVERSION TO +	D4601	208.	13.00	84.	29.	23.	1.64

	HYDROGRAPH AT						
+		DV4601	0.	.25	0.	0.	0.	1.64
	HYDROGRAPH AT						
+		S4604	14.	12.75	5.	2.	1.	.04
	ROUTED TO						
+		R4605	13.	13.00	5.	2.	1.	.04
	HYDROGRAPH AT						
+		D4585	714.	12.75	272.	87.	70.	1.08
	ROUTED TO						
+		R4607	669.	13.00	268.	87.	70.	1.08
	HYDROGRAPH AT						
+		S4610	599.	12.50	115.	36.	29.	.95
	HYDROGRAPH AT						
+		D4597	23.	13.00	10.	4.	3.	.38
	5 COMBINED AT						
+		C4611	897.	12.75	390.	127.	102.	2.62
	DIVERSION TO						
+		D4613	897.	12.75	390.	127.	102.	2.62
	HYDROGRAPH AT						
+		DV4613	0.	.25	0.	0.	0.	2.62
	HYDROGRAPH AT						
+		4614	119.	12.25	19.	6.	5.	.15
	DIVERSION TO						
+		D4615	48.	12.25	8.	2.	2.	.15
	HYDROGRAPH AT						
+		DV4615	71.	12.25	12.	4.	3.	.15
	ROUTED TO						
+		R4616	58.	12.25	12.	4.	3.	.15
	HYDROGRAPH AT						
+		S4618	39.	12.75	13.	4.	3.	.11
	2 COMBINED AT						
+		C4619	88.	12.50	24.	8.	6.	.26
	DIVERSION TO						
+		D4620	88.	12.50	24.	8.	6.	.26
	HYDROGRAPH AT						
+		DV4620	0.	.25	0.	0.	0.	.26
	ROUTED TO						
+		R4621	0.	.25	0.	0.	0.	.26
	HYDROGRAPH AT						
+		S4622	33.	12.50	11.	3.	3.	.09

	2 COMBINED AT						
+		C4623	32.	12.50	10.	3.	3.	.35
	DIVERSION TO						
+		D4624	13.	12.50	4.	1.	1.	.35
	HYDROGRAPH AT						
+		DV4624	19.	12.50	6.	2.	2.	.35
	ROUTED TO						
+		R4625	18.	12.75	6.	2.	2.	.35
	HYDROGRAPH AT						
+		S4626	45.	12.75	17.	6.	5.	.15
	2 COMBINED AT						
+		C4627	62.	12.75	23.	8.	6.	.50
	DIVERSION TO						
+		D4628	25.	12.75	9.	3.	2.	.50
	HYDROGRAPH AT						
+		DV4628	37.	12.75	14.	5.	4.	.50
	ROUTED TO						
+		R4629	36.	12.75	14.	5.	4.	.50
	HYDROGRAPH AT						
+		S4630	45.	12.75	17.	6.	5.	.15
	HYDROGRAPH AT						
+		D4107	346.	15.50	324.	168.	135.	1.08
	ROUTED TO						
+		R4631	346.	15.75	324.	167.	135.	1.08
	3 COMBINED AT						
+		C4632	366.	15.25	340.	178.	144.	.65
	DIVERSION TO						
+		D4634	256.	15.25	238.	125.	100.	.65
	HYDROGRAPH AT						
+		DV4634	110.	15.25	102.	53.	43.	.65
	ROUTED TO						
+		R4635	110.	15.50	102.	53.	43.	.65
	HYDROGRAPH AT						
+		D4615	48.	12.25	8.	2.	2.	.15
	ROUTED TO						
+		R4636	32.	12.50	8.	2.	2.	.15
	HYDROGRAPH AT						
+		D4620	88.	12.50	24.	8.	6.	.26
	ROUTED TO						

+		R4638	85.	12.75	27.	8.	7.	.26
	HYDROGRAPH AT							
+		D4624	13.	12.50	4.	1.	1.	.35
	ROUTED TO							
+		R4640	10.	13.00	4.	1.	1.	.35
	HYDROGRAPH AT							
+		D4628	25.	12.75	9.	3.	2.	.50
	ROUTED TO							
+		R4642	23.	13.00	9.	3.	2.	.50
	4 COMBINED AT							
+		C4643	152.	13.00	51.	16.	13.	.00
	HYDROGRAPH AT							
+		S4644	144.	13.00	60.	20.	16.	.55
	4 COMBINED AT							
+		C4645	300.	13.00	187.	87.	70.	3.83
	DIVERSION TO							
+		D4647	300.	13.00	187.	87.	70.	3.83
	HYDROGRAPH AT							
+		DV4647	0.	.25	0.	0.	0.	3.83
	HYDROGRAPH AT							
+		S4650	48.	12.75	18.	6.	5.	.16
	DIVERSION TO							
+		D4651	48.	12.75	18.	6.	5.	.16
	HYDROGRAPH AT							
+		DV4651	0.	.25	0.	0.	0.	.16
	HYDROGRAPH AT							
+		D4634	256.	15.25	238.	125.	100.	.65
	ROUTED TO							
+		R4652	256.	15.50	238.	124.	100.	.65
	HYDROGRAPH AT							
+		S4654	37.	14.25	22.	8.	7.	.23
	3 COMBINED AT							
+		C4655	286.	15.00	258.	133.	107.	.39
	DIVERSION TO							
+		D4656	114.	15.00	103.	53.	43.	.39
	HYDROGRAPH AT							
+		DV4656	171.	15.00	155.	80.	64.	.39
	ROUTED TO							
+		R4657	169.	15.75	153.	77.	62.	.39

	HYDROGRAPH AT						
+		D4199	404.	15.00	388.	234.	189.	16.86
	ROUTED TO						
+		R4658	403.	15.25	388.	233.	188.	16.86
	HYDROGRAPH AT						
+		S4660	115.	12.75	39.	13.	10.	.34
	3 COMBINED AT						
+		C4661	604.	15.50	567.	334.	269.	.73
	ROUTED TO						
+		R4663	604.	15.75	567.	331.	267.	.73
	HYDROGRAPH AT						
+		D4656	114.	15.00	103.	53.	43.	.39
	ROUTED TO						
+		R4664	114.	15.25	103.	52.	42.	.39
	HYDROGRAPH AT						
+		S4666	117.	13.25	59.	20.	16.	.55
	4 COMBINED AT						
+		C4667	754.	15.50	697.	397.	320.	5.11
	DIVERSION TO						
+		D4669	754.	15.50	697.	397.	320.	5.11
	HYDROGRAPH AT						
+		DV4669	0.	.25	0.	0.	0.	5.11
	HYDROGRAPH AT						
+		S4670	50.	12.75	17.	6.	5.	.17
	DIVERSION TO						
+		D4671	50.	12.75	17.	6.	5.	.17
	HYDROGRAPH AT						
+		DV4671	0.	.25	0.	0.	0.	.17
	HYDROGRAPH AT						
+		S4674	151.	13.00	64.	22.	18.	.64
	3 COMBINED AT						
+		C4675	148.	13.00	62.	21.	17.	5.92
	DIVERSION TO						
+		D4677	148.	13.00	62.	21.	17.	5.92
	HYDROGRAPH AT						
+		DV4677	0.	.25	0.	0.	0.	5.92
	HYDROGRAPH AT						
+		S4680	49.	12.75	15.	5.	4.	.13
	ROUTED TO						
+		R4681	48.	13.00	15.	5.	4.	.13

	HYDROGRAPH AT						
+	S4684	42.	12.75	17.	6.	5.	.15
	ROUTED TO						
+	R4685	41.	13.00	17.	6.	5.	.15
	HYDROGRAPH AT						
+	S4688	30.	12.75	12.	4.	3.	.11
	ROUTED TO						
+	R4689	31.	13.00	13.	4.	3.	.11
	HYDROGRAPH AT						
+	S4690	187.	13.00	91.	31.	25.	.93
	5 COMBINED AT						
+	C4691	285.	13.00	129.	45.	36.	7.24
	DIVERSION TO						
+	D4693	285.	13.00	129.	45.	36.	7.24
	HYDROGRAPH AT						
+	DV4693	0.	.25	0.	0.	0.	7.24
	HYDROGRAPH AT						
+	S4696	20.	12.50	5.	2.	1.	.04
	ROUTED TO						
+	R4697	15.	13.00	5.	2.	1.	.04
	HYDROGRAPH AT						
+	S4700	195.	13.00	83.	28.	23.	.79
	2 COMBINED AT						
+	C4701	209.	13.00	88.	30.	24.	.83
	ROUTED TO						
+	R4703	200.	13.50	89.	30.	24.	.83
	HYDROGRAPH AT						
+	S4706	304.	12.25	51.	16.	13.	.26
	HYDROGRAPH AT						
+	D4409	2700.	12.75	1041.	368.	297.	30.69
	ROUTED TO						
+	R4707	2616.	12.75	1038.	367.	296.	30.69
	3 COMBINED AT						
+	C4709	3300.	12.75	1312.	457.	369.	1.09
	DIVERSION TO						
+	D4711	3300.	12.75	1312.	457.	369.	1.09
	HYDROGRAPH AT						
+	DV4711	0.	.25	0.	0.	0.	1.09
	HYDROGRAPH AT						

+	S4714	68.	12.50	14.	4.	4.	.10
ROUTED TO							
+	R4715	68.	12.50	14.	4.	4.	.10
HYDROGRAPH AT							
+	S4718	38.	12.50	8.	3.	2.	.07
3 COMBINED AT							
+	C4719	101.	12.50	21.	7.	5.	1.26
ROUTED TO							
+	R4721	100.	12.50	21.	7.	5.	1.26
HYDROGRAPH AT							
+	S4722	13.	12.25	3.	1.	1.	.02
HYDROGRAPH AT							
+	S4726	101.	12.50	21.	7.	5.	.16
3 COMBINED AT							
+	C4727	207.	12.50	44.	14.	11.	1.44
ROUTED TO							
+	R4729	199.	12.50	44.	14.	11.	1.44
HYDROGRAPH AT							
+	S4730	91.	13.00	38.	13.	10.	.31
2 COMBINED AT							
+	C4731	268.	12.50	81.	26.	21.	1.75
ROUTED TO							
+	R4733	254.	12.50	81.	26.	21.	1.75
3 COMBINED AT							
+	EMF8	4630.	13.00	1973.	746.	602.	129.50
ROUTED TO							
+	R4737	4598.	13.25	1978.	742.	599.	129.50
HYDROGRAPH AT							
+	S4740	52.	13.25	28.	10.	8.	.26
2 COMBINED AT							
+	C4741	4632.	13.25	1998.	750.	605.	129.76
HYDROGRAPH AT							
+	S4744	177.	13.00	71.	23.	19.	.52
DIVERSION TO							
+	D4745	89.	13.00	35.	12.	9.	.52
HYDROGRAPH AT							
+	DV4745	89.	13.00	35.	12.	9.	.52
ROUTED TO							
+	R4747	88.	13.00	35.	12.	9.	.52

	HYDROGRAPH AT							
+		S4750	40.	12.75	16.	6.	4.	.16
	2 COMBINED AT							
+		C4751	125.	13.00	51.	17.	14.	.68
	ROUTED TO							
+		R4753	123.	13.00	51.	17.	14.	.68
	HYDROGRAPH AT							
+		S4756	75.	13.25	37.	13.	10.	.37
	2 COMBINED AT							
+		C4757	192.	13.00	87.	30.	24.	1.04
	ROUTED TO							
+		R4759	189.	13.25	87.	30.	24.	1.04
	HYDROGRAPH AT							
+		S4760	66.	12.75	23.	8.	6.	.19
	2 COMBINED AT							
+		C4761	242.	13.00	109.	37.	30.	1.24
	ROUTED TO							
+		R4763	238.	13.00	109.	37.	30.	1.24
	HYDROGRAPH AT							
+		S4766	90.	12.75	37.	12.	10.	.30
	2 COMBINED AT							
+		C4767	325.	13.00	145.	49.	40.	1.53
	ROUTED TO							
+		R4769	318.	13.00	145.	49.	40.	1.53
	HYDROGRAPH AT							
+		S4770	92.	12.75	37.	12.	10.	.28
	2 COMBINED AT							
+		C4771	401.	13.00	180.	61.	49.	1.82
	ROUTED TO							
+		R4773	394.	13.00	180.	61.	49.	1.82
	HYDROGRAPH AT							
+		S4776	36.	13.50	19.	7.	6.	.23
	HYDROGRAPH AT							
+		D4711	3300.	12.75	1312.	457.	369.	1.09
	ROUTED TO							
+		R4777	3179.	13.00	1309.	457.	369.	1.09
	ROUTED TO							
+		R4779	3171.	13.00	1306.	457.	369.	1.09
	ROUTED TO							
+		R4781	3147.	13.00	1307.	457.	369.	1.09

	3 COMBINED AT						
+		C4783	3535.	13.00	1495.	521.	421.	2.05
	DIVERSION TO						
+		D4785	1434.	13.00	378.	95.	76.	2.05
	HYDROGRAPH AT						
+		DV4785	2101.	13.00	1118.	427.	344.	2.05
	ROUTED TO						
+		R4787	2071.	13.25	1107.	424.	342.	2.05
	HYDROGRAPH AT						
+		S4790	99.	15.00	77.	31.	25.	1.02
	2 COMBINED AT						
+		C4791	2126.	13.25	1177.	454.	366.	3.07
	2 COMBINED AT						
+		EMF9	6455.	13.25	3025.	1145.	924.	132.83
	ROUTED TO						
+		R4797	6282.	13.25	3017.	1141.	921.	132.83
	HYDROGRAPH AT						
+		D4589	45.	12.50	9.	3.	2.	.07
	ROUTED TO						
+		R5001	44.	12.50	9.	3.	2.	.07
	HYDROGRAPH AT						
+		S5004	30.	17.75	27.	14.	11.	.39
	2 COMBINED AT						
+		C5005	54.	12.75	32.	16.	13.	.39
	ROUTED TO						
+		R5007	50.	13.00	32.	16.	13.	.39
	HYDROGRAPH AT						
+		S5010	137.	12.75	44.	14.	11.	.34
	ROUTED TO						
+		R5011	129.	12.75	43.	14.	11.	.34
	HYDROGRAPH AT						
+		S5014	60.	12.50	14.	5.	4.	.11
	ROUTED TO						
+		R5015	57.	12.75	15.	5.	4.	.11
	HYDROGRAPH AT						
+		S5020	182.	12.75	65.	21.	17.	.52
	4 COMBINED AT						
+		C5021	403.	12.75	149.	55.	45.	1.36
	ROUTED TO						

+	R5023	385.	13.00	147.	55.	44.	1.36
HYDROGRAPH AT +	D4591	34.	12.75	13.	4.	3.	.11
ROUTED TO +	R5025	32.	13.00	13.	4.	3.	.11
HYDROGRAPH AT +	S5030	79.	12.50	23.	8.	6.	.18
2 COMBINED AT +	C5031	98.	12.50	36.	12.	9.	.18
ROUTED TO +	R5033	92.	13.00	35.	12.	9.	.18
HYDROGRAPH AT +	S5038	113.	13.00	46.	15.	12.	.37
3 COMBINED AT +	C5039	580.	13.00	225.	81.	65.	1.91
ROUTED TO +	R5041	549.	13.25	224.	81.	66.	1.91
HYDROGRAPH AT +	D4601	208.	13.00	84.	29.	23.	1.64
ROUTED TO +	R5043	200.	13.00	83.	28.	23.	1.64
HYDROGRAPH AT +	S5046	53.	12.75	21.	7.	6.	.17
2 COMBINED AT +	C5047	262.	13.00	107.	36.	29.	.17
ROUTED TO +	R5049	260.	13.00	107.	36.	29.	.17
HYDROGRAPH AT +	S5050	37.	12.75	13.	4.	3.	.10
2 COMBINED AT +	C5051	288.	13.00	119.	40.	33.	.27
ROUTED TO +	R5053	286.	13.25	120.	41.	33.	.27
HYDROGRAPH AT +	D4613	897.	12.75	390.	127.	102.	2.62
ROUTED TO +	R5055	891.	12.75	386.	126.	102.	2.62
HYDROGRAPH AT +	S5060	104.	12.75	37.	12.	10.	.29

	2 COMBINED AT						
+		C5061	1038.	12.75	434.	142.	114.	.29
	ROUTED TO						
+		R5063	1022.	13.00	432.	141.	114.	.29
	HYDROGRAPH AT						
+		S5066	120.	13.00	52.	18.	14.	.43
	4 COMBINED AT						
+		C5067	1864.	13.00	806.	275.	221.	2.91
	ROUTED TO						
+		R5069	1847.	13.25	802.	274.	221.	2.91
	HYDROGRAPH AT						
+		S5070	81.	13.25	40.	14.	11.	.35
	2 COMBINED AT						
+		C5071	1920.	13.25	840.	287.	232.	3.26
	ROUTED TO						
+		R5073	1907.	13.25	840.	288.	232.	3.26
	HYDROGRAPH AT						
+		S5080	110.	13.25	50.	17.	14.	.44
	DIVERSION TO						
+		D5081	11.	13.25	5.	2.	1.	.44
	HYDROGRAPH AT						
+		DV5081	99.	13.25	45.	16.	13.	.44
	2 COMBINED AT						
+		C5083	1996.	13.25	882.	302.	244.	3.69
	DIVERSION TO						
+		D5085	1996.	13.25	882.	302.	244.	3.69
	HYDROGRAPH AT						
+		DV5085	0.	.25	0.	0.	0.	3.69
	HYDROGRAPH AT						
+		D4677	148.	13.00	62.	21.	17.	5.92
	DIVERSION TO						
+		D5087	111.	13.00	47.	16.	13.	5.92
	HYDROGRAPH AT						
+		DV5087	37.	13.00	16.	5.	4.	5.92
	ROUTED TO						
+		R5089	36.	13.00	16.	5.	4.	5.92
	HYDROGRAPH AT						
+		S5090	35.	12.50	11.	4.	3.	.09
	2 COMBINED AT						
+		C5091	66.	12.75	26.	9.	7.	6.01

	DIVERSION TO						
+		D5093	50.	12.75	20.	7.	5.	6.01
	HYDROGRAPH AT						
+		DV5093	17.	12.75	7.	2.	2.	6.01
	ROUTED TO						
+		R5095	16.	13.00	7.	2.	2.	6.01
	HYDROGRAPH AT						
+		S5100	28.	12.50	7.	2.	2.	.05
	2 COMBINED AT						
+		C5101	35.	12.50	13.	4.	4.	6.06
	DIVERSION TO						
+		D5103	32.	12.50	12.	4.	3.	6.06
	HYDROGRAPH AT						
+		DV5103	4.	12.50	1.	0.	0.	6.06
	HYDROGRAPH AT						
+		D4647	300.	13.00	187.	87.	70.	3.83
	ROUTED TO						
+		R5105	288.	13.25	184.	86.	69.	3.83
	HYDROGRAPH AT						
+		D4651	48.	12.75	18.	6.	5.	.16
	ROUTED TO						
+		R5107	45.	13.25	17.	6.	5.	.16
	HYDROGRAPH AT						
+		D4669	754.	15.50	697.	397.	320.	5.11
	ROUTED TO						
+		R5109	753.	15.50	697.	393.	317.	5.11
	HYDROGRAPH AT						
+		D4671	50.	12.75	17.	6.	5.	.17
	ROUTED TO						
+		R5111	47.	12.75	18.	6.	5.	.17
	HYDROGRAPH AT						
+		S5114	13.	13.25	6.	2.	2.	.05
	5 COMBINED AT						
+		C5115	1006.	13.50	934.	511.	412.	.05
	DIVERSION TO						
+		D5117	906.	13.50	840.	460.	371.	.05
	HYDROGRAPH AT						
+		DV5117	101.	13.50	93.	51.	41.	.05
	ROUTED TO						

+	R5119	101.	13.50	93.	51.	41.	.05
HYDROGRAPH AT							
+	D5081	11.	13.25	5.	2.	1.	.44
4 COMBINED AT							
+	C5121	105.	13.50	95.	51.	41.	9.81
ROUTED TO							
+	R5123	104.	13.75	95.	51.	41.	9.81
HYDROGRAPH AT							
+	S5126	4.	12.75	1.	0.	0.	.01
2 COMBINED AT							
+	C5127	106.	13.75	95.	51.	41.	9.82
ROUTED TO							
+	R5129	106.	13.75	95.	51.	41.	9.82
HYDROGRAPH AT							
+	D5087	111.	13.00	47.	16.	13.	5.92
ROUTED TO							
+	R5131	110.	13.50	48.	16.	13.	5.92
HYDROGRAPH AT							
+	D4693	285.	13.00	129.	45.	36.	7.24
ROUTED TO							
+	R5133	281.	13.25	128.	44.	36.	7.24
HYDROGRAPH AT							
+	D4745	89.	13.00	35.	12.	9.	.52
ROUTED TO							
+	R5135	87.	13.00	35.	12.	9.	.52
HYDROGRAPH AT							
+	D5093	50.	12.75	20.	7.	5.	6.01
ROUTED TO							
+	R5137	46.	13.50	19.	6.	5.	6.01
HYDROGRAPH AT							
+	S5138	133.	13.00	58.	20.	16.	.49
5 COMBINED AT							
+	C5139	670.	13.25	295.	101.	82.	.49
DIVERSION TO							
+	D5141	335.	13.25	148.	51.	41.	.49
HYDROGRAPH AT							
+	DV5141	335.	13.25	148.	51.	41.	.49
ROUTED TO							
+	R5143	325.	13.25	147.	51.	41.	.49

	HYDROGRAPH AT						
+		S5146	109.	13.25	53.	18.	15.	.46
	HYDROGRAPH AT						
+		D5103	32.	12.50	12.	4.	3.	6.06
	ROUTED TO						
+		R5149	27.	13.25	11.	4.	3.	6.06
	HYDROGRAPH AT						
+		D5117	906.	13.50	840.	460.	371.	.05
	ROUTED TO						
+		R5151	897.	13.50	838.	455.	367.	.05
	4 COMBINED AT						
+		C5153	1309.	13.50	1008.	517.	417.	.95
	DIVERSION TO						
+		D5155	982.	13.50	756.	388.	313.	.95
	HYDROGRAPH AT						
+		DV5155	327.	13.50	252.	129.	104.	.95
	ROUTED TO						
+		R5157	322.	13.75	251.	129.	104.	.95
	2 COMBINED AT						
+		C5159	414.	13.75	339.	176.	142.	10.77
	DIVERSION TO						
+		D5161	373.	13.75	305.	158.	128.	10.77
	HYDROGRAPH AT						
+		DV5161	41.	13.75	34.	18.	14.	10.77
	ROUTED TO						
+		R5163	41.	14.00	34.	17.	14.	10.77
	HYDROGRAPH AT						
+		S5170	84.	13.00	37.	13.	10.	.31
	2 COMBINED AT						
+		C5173	101.	13.50	65.	29.	24.	11.08
	DIVERSION TO						
+		D5175	50.	13.50	32.	15.	12.	11.08
	HYDROGRAPH AT						
+		DV5175	50.	13.50	32.	15.	12.	11.08
	ROUTED TO						
+		R5177	49.	13.75	32.	14.	12.	11.08
	HYDROGRAPH AT						
+		D5085	1996.	13.25	882.	302.	244.	3.69
	DIVERSION TO						
+		D5179	998.	13.25	441.	151.	122.	3.69

	HYDROGRAPH AT						
+		DV5179	998.	13.25	441.	151.	122.	3.69
	ROUTED TO						
+		R5181	985.	13.25	441.	151.	122.	3.69
	DIVERSION TO						
+		D5183	788.	13.25	353.	121.	98.	3.69
	HYDROGRAPH AT						
+		DV5183	197.	13.25	88.	30.	24.	3.69
	ROUTED TO						
+		R5185	194.	13.25	88.	30.	24.	3.69
	DIVERSION TO						
+		D5187	26.	13.25	25.	14.	11.	3.69
	HYDROGRAPH AT						
+		DV5187	168.	13.25	63.	16.	13.	3.69
	ROUTED TO						
+		R5189	166.	13.50	63.	16.	13.	3.69
	DIVERSION TO						
+		D5191	26.	13.50	22.	6.	5.	3.69
	HYDROGRAPH AT						
+		DV5191	140.	13.50	41.	10.	8.	3.69
	ROUTED TO						
+		R5193	140.	13.50	41.	10.	8.	3.69
	DIVERSION TO						
+		D5195	112.	13.50	33.	8.	7.	3.69
	HYDROGRAPH AT						
+		DV5195	28.	13.50	8.	2.	2.	3.69
	ROUTED TO						
+		R5197	27.	13.50	8.	2.	2.	3.69
	DIVERSION TO						
+		D5199	15.	13.50	6.	2.	1.	3.69
	HYDROGRAPH AT						
+		DV5199	12.	13.50	2.	0.	0.	3.69
	ROUTED TO						
+		R5201	12.	13.75	2.	0.	0.	3.69
	DIVERSION TO						
+		D5203	12.	13.75	2.	0.	0.	3.69
	HYDROGRAPH AT						
+		DV5203	0.	.25	0.	0.	0.	3.69
	HYDROGRAPH AT						

+	S5204	237.	13.00	108.	36.	29.	.90
2 COMBINED AT +	C5205	228.	13.00	105.	36.	29.	4.59
DIVERSION TO +	D5206	114.	13.00	53.	18.	14.	4.59
HYDROGRAPH AT +	DV5206	114.	13.00	53.	18.	14.	4.59
ROUTED TO +	R5207	113.	13.25	53.	18.	14.	4.59
DIVERSION TO +	D5209	50.	13.25	24.	8.	7.	4.59
HYDROGRAPH AT +	DV5209	63.	13.25	29.	10.	8.	4.59
HYDROGRAPH AT +	S5210	281.	13.25	125.	43.	35.	1.06
2 COMBINED AT +	C5213	333.	13.25	150.	52.	42.	5.65
DIVERSION TO +	D5215	333.	13.25	150.	52.	42.	5.65
HYDROGRAPH AT +	DV5215	0.	.25	0.	0.	0.	5.65
HYDROGRAPH AT +	D5179	998.	13.25	441.	151.	122.	3.69
ROUTED TO +	R5217	978.	13.50	436.	150.	121.	3.69
HYDROGRAPH AT +	D5183	788.	13.25	353.	121.	98.	3.69
ROUTED TO +	R5219	787.	13.50	352.	121.	98.	3.69
HYDROGRAPH AT +	D5187	26.	13.25	25.	14.	11.	3.69
ROUTED TO +	R5221	26.	14.00	25.	14.	11.	3.69
HYDROGRAPH AT +	D5191	26.	13.50	22.	6.	5.	3.69
ROUTED TO +	R5223	26.	13.75	21.	6.	5.	3.69
HYDROGRAPH AT +	D5195	112.	13.50	33.	8.	7.	3.69

	ROUTED TO						
+		R5225	109.	13.75	35.	9.	7.	3.69
	5 COMBINED AT						
+		C5227	2291.	13.50	977.	334.	270.	.00
	HYDROGRAPH AT						
+		S5230	161.	13.75	93.	33.	26.	.79
	3 COMBINED AT						
+		C5233	2291.	13.50	1023.	353.	285.	6.44
	DIVERSION TO						
+		D5235	1017.	13.50	475.	165.	133.	6.44
	HYDROGRAPH AT						
+		DV5235	1017.	13.50	475.	165.	133.	6.44
	HYDROGRAPH AT						
+		D5199	15.	13.50	6.	2.	1.	3.69
	ROUTED TO						
+		R5237	15.	14.25	6.	2.	1.	3.69
	HYDROGRAPH AT						
+		D5203	12.	13.75	2.	0.	0.	3.69
	ROUTED TO						
+		R5239	12.	14.00	2.	1.	0.	3.69
	HYDROGRAPH AT						
+		D5206	114.	13.00	53.	18.	14.	4.59
	ROUTED TO						
+		R5241	113.	13.25	53.	18.	14.	4.59
	HYDROGRAPH AT						
+		D5209	50.	13.25	24.	8.	7.	4.59
	ROUTED TO						
+		R5243	50.	13.25	24.	8.	6.	4.59
	4 COMBINED AT						
+		C5245	199.	13.50	97.	32.	25.	.00
	ROUTED TO						
+		R5247	198.	13.50	97.	32.	25.	.00
	2 COMBINED AT						
+		C5249	1185.	13.50	557.	193.	155.	6.44
	DIVERSION TO						
+		D5251	356.	13.50	167.	58.	47.	6.44
	HYDROGRAPH AT						
+		DV5251	830.	13.50	390.	135.	109.	6.44
	ROUTED TO						
+		R5253	819.	13.50	389.	134.	108.	6.44

	HYDROGRAPH AT						
+		D5235	1017.	13.50	475.	165.	133.	6.44
	ROUTED TO						
+		R5255	1008.	13.50	474.	164.	133.	6.44
	HYDROGRAPH AT						
+		S5258	54.	12.75	16.	5.	4.	.13
	4 COMBINED AT						
+		C5259	1741.	13.50	856.	302.	244.	17.65
	DIVERSION TO						
+		D5261	435.	13.50	214.	76.	61.	17.65
	HYDROGRAPH AT						
+		DV5261	1306.	13.50	642.	227.	183.	17.65
	DIVERSION TO						
+		D5263	1306.	13.50	642.	227.	183.	17.65
	HYDROGRAPH AT						
+		DV5263	0.	.25	0.	0.	0.	17.65
	HYDROGRAPH AT						
+		D5155	982.	13.50	756.	388.	313.	.95
	HYDROGRAPH AT						
+		S5266	29.	12.75	11.	4.	3.	.09
	2 COMBINED AT						
+		C5269	1038.	13.50	781.	400.	323.	.09
	DIVERSION TO						
+		D5271	1038.	13.50	781.	400.	323.	.09
	HYDROGRAPH AT						
+		DV5271	0.	.25	0.	0.	0.	.09
	HYDROGRAPH AT						
+		D5141	335.	13.25	148.	51.	41.	.49
	ROUTED TO						
+		R5273	318.	13.50	145.	50.	40.	.49
	HYDROGRAPH AT						
+		S5276	83.	13.50	49.	18.	14.	.47
	2 COMBINED AT						
+		C5277	402.	13.50	193.	68.	55.	.47
	DIVERSION TO						
+		D5279	402.	13.50	193.	68.	55.	.47
	HYDROGRAPH AT						
+		D5279	0.	.25	0.	0.	0.	.47
	HYDROGRAPH AT						

+		D4785	1434.	13.00	378.	95.	76.	2.05
	ROUTED TO							
+		R5281	1363.	13.25	375.	94.	76.	2.05
	HYDROGRAPH AT							
+		S5284	126.	13.25	57.	19.	16.	.48
	2 COMBINED AT							
+		C5285	1533.	13.25	446.	117.	95.	.48
	DIVERSION TO							
+		D5287	1400.	13.25	435.	114.	92.	.48
	HYDROGRAPH AT							
+		DV5287	133.	13.25	11.	3.	2.	.48
	ROUTED TO							
+		R5289	114.	13.25	11.	3.	2.	.48
	HYDROGRAPH AT							
+		S5290	107.	14.00	63.	24.	19.	.76
	5 COMBINED AT							
+		C5291	117.	14.00	68.	25.	20.	19.45
	2 COMBINED AT							
+		EMF10	6308.	13.25	3062.	1160.	936.	152.28
	ROUTED TO							
+		R5295	6270.	13.50	3044.	1152.	930.	152.28
	HYDROGRAPH AT							
+		D5263	1306.	13.50	642.	227.	183.	17.65
	ROUTED TO							
+		R5297	1298.	13.75	640.	226.	183.	17.65
	HYDROGRAPH AT							
+		D5175	50.	13.50	32.	15.	12.	11.08
	HYDROGRAPH AT							
+		D5161	373.	13.75	305.	158.	128.	10.77
	2 COMBINED AT							
+		C5299	488.	13.50	367.	188.	152.	.00
	ROUTED TO							
+		R5301	484.	13.75	365.	186.	150.	.00
	HYDROGRAPH AT							
+		D5271	1038.	13.50	781.	400.	323.	.09
	ROUTED TO							
+		R5303	1021.	13.50	780.	399.	322.	.09
	HYDROGRAPH AT							
+		D5279	402.	13.50	193.	68.	55.	.47

	HYDROGRAPH AT						
+	D5287	1400.	13.25	435.	114.	92.	.48
	2 COMBINED AT						
+	C5305	1911.	13.50	688.	200.	161.	.00
	ROUTED TO						
+	R5307	1865.	13.50	685.	200.	161.	.00
	HYDROGRAPH AT						
+	S5308	228.	13.00	105.	35.	29.	.88
	5 COMBINED AT						
+	C5309	4722.	13.50	2487.	1027.	828.	.88
	DIVERSION TO						
+	D5311	4722.	13.50	2487.	1027.	828.	.88
	HYDROGRAPH AT						
+	DV5311	0.	.25	0.	0.	0.	.88
	HYDROGRAPH AT						
+	S5314	179.	13.25	81.	28.	23.	.77
	3 COMBINED AT						
+	EMF11	6386.	13.50	3104.	1175.	948.	153.93
	ROUTED TO						
+	R5317	6326.	13.50	3104.	1172.	946.	153.93
	HYDROGRAPH AT						
+	D5251	356.	13.50	167.	58.	47.	6.44
	ROUTED TO						
+	R5319	350.	13.75	165.	57.	46.	6.44
	HYDROGRAPH AT						
+	D5261	435.	13.50	214.	76.	61.	17.65
	ROUTED TO						
+	R5321	435.	13.75	214.	76.	61.	17.65
	HYDROGRAPH AT						
+	D5311	4722.	13.50	2487.	1027.	828.	.88
	ROUTED TO						
+	R5323	4650.	13.75	2470.	1022.	824.	.88
	HYDROGRAPH AT						
+	S5326	269.	12.75	111.	37.	30.	.90
	5 COMBINED AT						
+	C5329	10399.	13.75	5508.	2176.	1755.	65.36
	ROUTED TO						
+	R5331	10271.	13.75	5497.	2161.	1744.	65.36
	HYDROGRAPH AT						
+	D5215	333.	13.25	150.	52.	42.	5.65

	ROUTED TO						
+		R5333	326.	13.50	148.	51.	41.	5.65
	HYDROGRAPH AT						
+		S5340	102.	13.25	47.	16.	13.	.40
	2 COMBINED AT						
+		C5341	439.	13.25	200.	69.	56.	.40
	ROUTED TO						
+		R5343	434.	13.50	197.	68.	55.	.40
	HYDROGRAPH AT						
+		S5346	116.	13.50	65.	23.	18.	.57
	ROUTED TO						
+		R5347	116.	13.75	65.	23.	18.	.57
	HYDROGRAPH AT						
+		S5350	92.	13.50	52.	18.	15.	.45
	2 COMBINED AT						
+		C5351	202.	13.75	115.	40.	33.	1.02
	ROUTED TO						
+		R5353	201.	13.75	114.	40.	32.	1.02
	HYDROGRAPH AT						
+		S5356	257.	13.00	105.	35.	28.	.88
	4 COMBINED AT						
+		EMF12	10792.	13.75	5783.	2266.	1828.	67.66
	DIVERSION TO						
+		D5358	1792.	13.75	203.	51.	41.	67.66
	HYDROGRAPH AT						
+		DV5358	9000.	13.50	5580.	2216.	1787.	67.66

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

EADMS13
Model Output

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****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            FEBRUARY 1981             *
*          REVISED  6 FEB 87           *
*                                      *
* RUN DATE  03/19/1990  TIME  09:22:59 *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*  THE HYDROLOGIC ENGINEERING CENTER   *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*  (916) 440-3285 OR (FTS) 448-3285    *
*                                      *
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X     X  XXXXXXX   XXXXX          X
X     X  X       X     X        XX
X     X  X       X              X
XXXXXXX  XXXX    X       XXXXX  X
X     X  X       X              X
X     X  X       X     X        X
X     X  XXXXXXX   XXXXX        XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID        EASTERN MARICOPA COUNTY MASTER DRAINAGE PLAN     DATA FILE: EADMS13.DAT
  2           ID        A-N WEST REVISED MODEL WITH THE FOLLOWING ASSUMPTIONS
  3           ID           1.  REVISED CN
  4           ID           2.  CAP OVERCHUTES ARE MODELED
  5           ID           3.  AREAL-REDUCTION METHODOLOGY USED
  6           ID
  7           ID        SPECIFICATIONS:  THIS MODEL REPRESENT THE EXISTING CONDITION OF THE
  8           ID                         WATERSHED
  9           ID                         TOTAL DRAINAGE AREA IS APPROXIMATELY 68 SQ. MI.
 10           ID                         100-YEAR FREQUENCY, 24-HOUR DURATION
 11           ID
 12           ID        METHODLOGY:      THE US CORPS OF ENGINEERS FLOOD HYDROLOGY MODEL HEC-1
 13           ID                         DATED FEB. 1981, 1985 REVISION.
 14           ID                         SCS TYPE II RAINFALL DISTRIBUTION
 15           ID                         SCS RUNOFF CURVE NUMBER METHOD, TR-55 JUNE 1986
 16           ID                         KINEMATIC WAVE PROCEDURE WAS USED FOR OVERLAND FLOW
 17           ID                         AND ROUTING TECHNIQUES.
 18           ID                         APPROXIMATE DIRECTION, LOCATION, AND LENGTH OF THE
 19           ID                         WASHES HAVE BEEN EVALUATED BASED ON OUR FIELD
 20           ID                         INVESTIGATION, U.S.G.S. MAPS, LANDIS AERIAL SURVEYS
 21           ID                         DATED DECEMBER 1987.
 22           ID                         THE NOAA TECHNICAL MEMORANDUM NWS HYDRO-40 DEPTH AREA
 23           ID                         RATIOS.
 24           ID
 25           ID
              *DIAGRAM
 26           IT      15                     120
 27           IO       5
 28           IN      30
 29           JD    3.65    0.01
 30           PC       0   0.005   0.011   0.016   0.022   0.028   0.035   0.041   0.048   0.056
 31           PC   0.063   0.071   0.080   0.089   0.098   0.109   0.120   0.133   0.147   0.163
 32           PC   0.181   0.204   0.235   0.283   0.663   0.735   0.772   0.799   0.820   0.838
 33           PC   0.854   0.868   0.880   0.891   0.902   0.912   0.921   0.929   0.937   0.945
 34           PC   0.952   0.959   0.965   0.972   0.978   0.984   0.989   0.995   1.000   1.000
 35           JD    3.52      30
 36           JD    3.44   70.75

 37           KK    SUB2
 38           KM        RUNOFF FROM SUBBASIN 2
 39           BA    3.41
 40           LS              75
 41           UK     250  0.0050   0.200     100
 42           RK   19000  0.0094   0.040    0.27    TRAP     0.0     2.0
 43           RK    6250  0.0001   0.025            TRAP    80.0     3.0

 44           KK     R03
 45           KM        ROUTE FLOWS FROM SUB2 TO SUB4
 46           RK    4940  .00015   0.025            TRAP   110.0     3.0     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID        EASTERN MARICOPA COUNTY MASTER DRAINAGE PLAN     DATA FILE: EADMS13.DAT
  2           ID        A-N WEST REVISED MODEL WITH THE FOLLOWING ASSUMPTIONS
  3           ID           1.  REVISED CN
  4           ID           2.  CAP OVERCHUTES ARE MODELED
  5           ID           3.  AREAL-REDUCTION METHODOLOGY USED
  6           ID
  7           ID        SPECIFICATIONS:  THIS MODEL REPRESENT THE EXISTING CONDITION OF THE
  8           ID                         WATERSHED
  9           ID                         TOTAL DRAINAGE AREA IS APPROXIMATELY 68 SQ. ML.
 10           ID                         100-YEAR FREQUENCY, 24-HOUR DURATION
 11           ID
 12           ID        METHODLOGY:      THE US CORPS OF ENGINEERS FLOOD HYDROLOGY MODEL HEC-1
 13           ID                         DATED FEB. 1981, 1985 REVISION.
 14           ID                         SCS TYPE II RAINFALL DISTRIBUTION
 15           ID                         SCS RUNOFF CURVE NUMBER METHOD, TR-55 JUNE 1986
 16           ID                         KINEMATIC WAVE PROCEDURE WAS USED FOR OVERLAND FLOW
 17           ID                         AND ROUTING TECHNIQUES.
 18           ID                         APPROXIMATE DIRECTION, LOCATION, AND LENGTH OF THE
 19           ID                         WASHES HAVE BEEN EVALUATED BASED ON OUR FIELD
 20           ID                         INVESTIGATION, U.S.G.S. MAPS, LANDIS AERIAL SURVEYS
 21           ID                         DATED DECEMBER 1987.
 22           ID                         THE NOAA TECHNICAL MEMORANDUM NWS HYDRO-40 DEPTH AREA
 23           ID                         RATIOS.
 24           ID
 25           ID
              *DIAGRAM
 26           IT      15                     120
 27           IO       5
 28           IN      30
 29           JD    3.65    0.01
 30           PC       0   0.005   0.011   0.016   0.022   0.028   0.035   0.041   0.048   0.056
 31           PC   0.063   0.071   0.080   0.089   0.098   0.109   0.120   0.133   0.147   0.163
 32           PC   0.181   0.204   0.235   0.283   0.663   0.735   0.772   0.799   0.820   0.838
 33           PC   0.854   0.868   0.880   0.891   0.902   0.912   0.921   0.929   0.937   0.945
 34           PC   0.952   0.959   0.965   0.972   0.978   0.984   0.989   0.995   1.000   1.000
 35           JD    3.52      30
 36           JD    3.44   70.75

 37           KK    SUB2
 38           KM        RUNOFF FROM SUBBASIN 2
 39           BA    3.41
 40           LS              75
 41           UK     250  0.0050   0.200     100
 42           RK   19000  0.0094   0.040    0.27    TRAP     0.0     2.0
 43           RK    6250  0.0001   0.025            TRAP    80.0     3.0

 44           KK     R03
 45           KM        ROUTE FLOWS FROM SUB2 TO SUB4
 46           RK    4940  .00015   0.025            TRAP   110.0     3.0     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  47          KK    SUB4
  48          KM        RUNOFF FROM SUBBASIN 4
  49          BA    3.27
  50          LS              82
  51          UK     750  0.0050   0.200     100
  52          RK   19600  0.0120   0.040    0.28    TRAP     2.0     4.0
  53          RK    4940  .00015   0.025            TRAP   110.0     3.0

  54          KK     C05
  55          KM        COMBINE FLOWS FROM SUB2 AND SUB4
  56          HC       2

  57          KK     R05
  58          KM        ROUTE FLOWS FROM SUB4 TO SUB6
  59          RK    4050  0.0003   0.025       1    TRAP    90.0     3.0     YES

  60          KK    SUB6
  61          KM        RUNOFF FROM SUBBASIN 6
  62          BA    3.41
  63          LS              83
  64          UK     120  0.0050   0.200     100
  65          RK    6000  0.0067   0.050    0.24    TRAP    20.0     0.0
  66          RK    7750  0.0067   0.016            TRAP    19.0     2.0

  67          KK     C07
  68          KM        COMBINE FLOWS FROM SUB 4 AND SUB 6
  69          HC       2

  70          KK     R07
  71          KM        ROUTE FLOWS FROM SUB6 TO SUB8
  72          RK    7470  0.0005   0.025       1    TRAP   120.0     3.0     YES

  73          KK    SUB8
  74          KM        RUNOFF FROM SUBBASIN 8
  75          BA    1.84
  76          LS              80
  77          UK     750  0.0050   0.200     100
  78          RK    6200  0.0071   0.050    0.90    TRAP    20.0    0.00
  79          RK    7470  0.0005   0.025            TRAP   120.0     3.0

  80          KK     C09
  81          KM        COMBINE FLOWS FROM SUB6 AND SUB8
  82          HC       2

  83          KK   SUB10
  84          KM        RUNOFF FROM SUBBASIN 10
  85          BA    0.33
  86          LS              78
  87          UK     500  0.0230   0.200     100
  88          RK    3000  0.0167   0.040  0.0646    TRAP     2.0     4.0
  89          RK    1480  0.0042   0.035            TRAP     8.0     1.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  90          KK  STRU01
  91          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #1
  92          RS       1    ELEV   67.11
  93          SV       0    0.15    0.82    3.24   13.08   40.71
  94          SQ       0       0     135     300     435     525
  95          SE   67.11      68      70      72      74      76

  96          KK   R0001
  97          KM        **ROUTE HYDROGRAPH FROM NORTH OF CAP TO SOUTH THROUGH 3-48" PIPE
  98          RK     120  0.0035   0.015       1    CIRC      10

  99          KK   SUB12
 100          KM        RUNOFF FROM SUBBASIN 12
 101          BA    0.75
 102          LS              81
 103          UK     500  0.0180   0.200     100
 104          RK    6600  0.0174   0.040  0.0710    TRAP     2.0     4.0
 105          RK    1060  0.0056   0.035            TRAP     8.0     1.5

 106          KK  STRU02
 107          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #2
 108          RS       1    ELEV   66.86
 109          SV       0    0.20    1.21    5.98   24.73
 110          SQ       0     180     720    1152    1512
 111          SE   66.87      68   70.66      72      74

 112          KK    C013
 113          KM        COMBINE RUNOFF FROM SUB10 AND SUB12
 114          HC       2

 115          KK    R013
 116          KM        ROUTE FLOWS FROM SUB10 AND SUB12 TO SUB14
 117          RK   10400  0.0098   0.035       1    TRAP     5.0     3.0     YES

 118          KK   SUB14
 119          KM        RUNOFF FROM SUBBASIN 14
 120          BA    1.17
 121          LS              81
 122          UK      85   0.005   0.200     100
 123          RK    8500  0.0067   0.050   0.036    TRAP    20.0     0.0
 124          RK    2600  0.0075   0.040            TRAP    32.0     6.0

 125          KK    C015
 126          KM        COMBINE FLOWS FROM SUB10 AND SUB12 AND SUB14
 127          HC       2

 128          KK   SUB16
 129          KM        RUNOFF FROM SUBBASIN 16
 130          BA    0.71
 131          LS              80
 132          UK     500  0.0133   0.200     100
 133          RK    8800  0.0148   0.040   0.158    TRAP     2.0     4.0
 134          RK    1700  0.0055   0.035            TRAP     8.0     1.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 135          KK  STRU03
 136          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #3
 137          RS       1    ELEV   66.68
 138          SV       0    0.12    0.92    3.00    5.12
 139          SQ       0      47     540    1152    1332
 140          SE   66.68      68      70      72      73

 141          KK   SUB18
 142          KM        RUNOFF FROM SUBBASIN 18
 143          BA    1.50
 144          LS              79
 145          UK    1000  0.0150   0.200     100
 146          RK    4800  0.0115   0.040  0.1033    TRAP     2.0     4.0
 147          RK   10000  0.0102   0.035            TRAP    20.0     3.0

 148          KK  STRU04
 149          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #4 & #5
 150          RS       1    ELEV    71.0
 151          SV       0    0.14    1.18    2.29    9.49   20.37
 152          SQ       0      60     372     900    1470    1680
 153          SE    71.0      72      74      76      78      79

 154          KK    CO19
 155          KM        COMBINE RUNOFF FROM SUB 16 AND SUB 18
 156          HC       2

 157          KK    RO19
 158          KM        ROUTE FLOWS FROM SUB16 AND SUB18 TO SUB20
 159          RK    8300  0.0102   0.035       1    TRAP     5.0     2.0     YES

 160          KK   SUB20
 161          KM        RUNOFF FROM SUBBASIN 20
 162          BA    1.05
 163          LS              85
 164          UK      90   0.005   0.200     100
 165          RK    5250  0.0075   0.050   0.043    TRAP    20.0     0.0
 166          RK    8300  0.0102   0.035            TRAP     5.0     2.0

 167          KK    CO21
 168          KM        COMBINE RUNOFF FROM SUB 16 & 18 AND SUB 20
 169          HC       2

 170          KK    RO21
 171          KM        ROUTE FLOWS FROM SUB20 TO SUB14
 172          RK    2600  0.0054   0.035       1    TRAP     5.0     2.0     YES

 173          KK    CO23
 174          KM        COMBINE RUNOFF FROM SUB14 AND SUB20
 175          HC       2    3.26
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 176          KK   SUB23
 177          KM        DIVERT RUNOFF FROM SUB20 AND SUB14 TO SUB32
 178          DT    DT31
 179          DI       0     1500     1750     2000     3000     4000
 180          DQ       0     1500     1500     1500     1500     1500

 181          KK    RO23
 182          KM        ROUTE FLOWS FROM SUB 14 TO SUB 24
 183          RK    5200   .0068     .025             TRAP       60        4      YES

 184          KK   SUB24
 185          KM        RUNOFF FROM SUBBASIN 24
 186          BA    2.11
 187          LS              82
 188          UK     100  0.0050   0.200      100
 189          RK    7000  0.0070   0.050     0.10    TRAP     20.0     0.00
 190          RK    9600  0.0038   0.035             TRAP     30.0     4.00

 191          KK    CO25
 192          KM        COMBINE FLOWS FROM SUB23 AND SUB24
 193          HC       2

 194          KK    RO25
 195          KM        ROUTE FLOWS FROM SUB24 TO SUB26
 196          RK    9000  0.0064   0.025        1    TRAP     12.0      2.0      YES

 197          KK   SUB26
 198          KM        RUNOFF FROM SUBBASIN 26
 199          BA    2.69
 200          LS              80
 201          UK    1250  0.0050   0.200      100
 202          RK    3500  0.0060   0.050     0.14    TRAP     20.0      0.0
 203          RK    9000  0.0064   0.025             TRAP     12.0      2.0

 204          KK    CO26
 205          KM        COMBINE FLOWS FROM SUB24 AND SUB26
 206          HC       2

 207          KK    CO27
 208          KM        COMBINE RUNOFF FROM SUB8 AND SUB26
 209          HC       2

 210          KK    RO27
 211          KM        ROUTE SUB8 THROUGH RWCD SUB28
 212          RK    2970  0.0007   0.025        1    TRAP      140      3.0      YES

 213          KK   SUB28
 214          KM        RUNOFF FROM SUBBASIN 28
 215          BA    0.97
 216          LS              78
 217          UK     870  0.0060   0.200      100
 218          RK    2500  0.0020   0.040     0.04    TRAP      2.0      4.0
 219          RK    8800  0.0059   0.035             TRAP     10.0      3.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 220          KK    CO[illegible]
 221          KM       [illegible]INE SUB28 AND RWCD FLOWS
 222          HC       [illegible]

 223          KK    RO[illegible]
 224          KM       [illegible] FLOWS FROM SUB28 TO SUB30
 225          RK    6[illegible] [illegible].0003   0.025       1    TRAP   140.0     3.0     YES

 226          KK   SU[illegible]
 227          KM       [illegible]OFF FROM SUBBASIN 30
 228          BA    1.[illegible]
 229          LS            75
 230          UK    1[illegible] [illegible].0020   0.200     100
 231          RK    50[illegible] [illegible].0060   0.040    0.07    TRAP     2.0     4.0
 232          RK    60[illegible] [illegible].0003   0.025            TRAP   140.0     3.0

 233          KK    CO[illegible]
 234          KM       [illegible]INE FLOWS FROM SUB28 AND SUB30
 235          HC       [illegible]

 236          KK   SUB[illegible]
 237          KM       [illegible]ERTED FLOWS FROM SUB20 AND SUB14
 238          DR    DT[illegible]

 239          KK    RO[illegible]
 240          KM       [illegible] FLOWS FROM SUB31 AND SUB32
 241          RK   1120[illegible] [illegible].0054   0.035       1    TRAP    30.0     2.0     YES

 242          KK   SUB[illegible]
 243          KM       [illegible]OFF FROM SUBBASIN 32
 244          BA    2.[illegible]
 245          LS            82
 246          UK    12[illegible]  [illegible].005   0.200     100
 247          RK    60[illegible] [illegible].0083   0.040   0.086    TRAP     2.0     4.0
 248          RK   112[illegible] [illegible].0054   0.035            TRAP    30.0     2.0

 249          KK   CO[illegible]
 250          KM       [illegible]INE FLOWS FROM SUB31 AND SUB32
 251          HC       [illegible]

 252          KK   SUB[illegible]4
 253          KM       [illegible]OFF FROM SUBBASIN 34
 254          BA    1.[illegible]
 255          LS            80
 256          UK    10[illegible] [illegible].0100   0.200     100
 257          RK    50[illegible] [illegible].0111   0.040   0.090    TRAP     2.0     4.0
 258          RK   137[illegible] [illegible].0102   0.035            TRAP    10.0     3.0

 259          KK    RO[illegible]
 260          KM       [illegible] FLOWS FROM SUB34 AND SUB36
 261          RK    32[illegible] [illegible].0093   0.035       1    TRAP    20.0     3.0     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 262          KK  STRU06
 263          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #6
 264          RS       1    ELEV      62
 265          SV       0    5.51   27.55   75.76  148.76
 266          SQ       0      84     276     525     705
 267          SE      62      64      66      68      70

 268          KK   SUB36
 269          KM        RUNOFF FROM SUBBASIN 36
 270          BA    0.33
 271          LS              82
 272          UK     250  0.0067   0.200     100
 273          RK    1500  0.0167   0.040  0.0269    TRAP     2.0     4.0
 274          RK    3200  0.0093   0.035            TRAP    20.0     3.0

 275          KK  STRU07
 276          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #7
 277          RS       1    ELEV    68.5
 278          SV       0    0.63    1.57    3.87   10.13
 279          SQ       0      27     113     233     330
 280          SE    68.5      70      72      74      76

 281          KK    CO37
 282          KM        COMBINE FLOWS FROM SUB34 AND SUB36
 283          HC       2

 284          KK   SUB38
 285          KM        RUNOFF FROM SUBBASIN 38
 286          BA    0.99
 287          LS              81
 288          UK     500  0.0125   0.200     100
 289          RK    4000  0.0125   0.040  0.0574    TRAP     2.0     4.0
 290          RK   14000  0.0090   0.035            TRAP    10.0     3.0

 291          KK    RO39
 292          KM        ROUTE FLOWS FROM SUB38 TO SUB40
 293          RK    6000  0.0120   0.035       1    TRAP    10.0     3.0     YES

 294          KK  STRU08
 295          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #8
 296          RS       1    ELEV      63
 297          SV       0    1.36    2.46   24.89   90.21  121.96
 298          SQ       0    3.25     800    1300    1750    2150
 299          SE     630      66      68      70      72      74

 300          KK   SUB40
 301          KM        RUNOFF FROM SUBBASIN 40
 302          BA    0.45
 303          LS              80
 304          UK     350  0.0180   0.200     100
 305          RK    2500  0.0100   0.040  0.0448    TRAP     2.0     4.0
 306          RK    6000  0.0120   0.035            TRAP    10.0     3.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  307         KK  STRU09
  308         KM        **ROUTE HYDROGRAPH THROUGH BASIN AT CAP OVERCHUTE #9
  309         RS       1    ELEV      63
  310         SV       0    1.36    2.46   24.89   90.21  121.96
  311         SQ       0     325     800    1300    1750    2150
  312         SE     630      66      68      70      72      74

  313         KK    CO41
  314         KM        COMBINE FLOWS FROM SUB38 AND SUB40
  315         HC       2

  316         KK   SUB41
  317         KM        DIVERT 50% FROM SUB40 TO SUB60
  318         DT     D43
  319         DI       0     100    1000   10000
  320         DQ       0      50     500    5000

  321         KK    CO45
  322         KM        COMBINE FLOWS FROM 50% OF SUB40 TO SUB36
  323         HC       2

  324         KK    RO45
  325         KM        ROUTE FLOWS FROM SUB45 TO SUB46
  326         RK   11200  0.0082   0.035       1    TRAP    10.0     3.0     YES

  327         KK   SUB46
  328         KM        RUNOFF FROM SUBBASIN 46
  329         BA    2.11
  330         LS              85
  331         UK    1250   0.010   0.200     100
  332         RK    2500  0.0100   0.040  0.0368    TRAP     2.0     4.0
  333         RK   11200  0.0082   0.035            TRAP    10.0     3.0

  334         KK    CO46
  335         KM        COMBINE FLOWS FROM SUB45 AND SUB46
  336         HC       2

  337         KK    RO46
  338         KM        ROUTE SUB46 TO SUB32
  339         RK    9200  0.0060   0.035       1    TRAP    10.0     1.0     YES

  340         KK    CO47
  341         KM        COMBINE RUNOFF FROM SUB32 AND SUB46
  342         HC       2

  343         KK    RO47
  344         KM        ROUTE SUB46 AND SUB32 TO SUB48
  345         RK    2800  0.0071    .035       1    TRAP    10.0     2.5     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 346          KK   SUB48
 347          KM        RUNOFF FROM SUBBASIN 48
 348          BA    0.91
 349          LS              77
 350          UK     967  0.0065   0.200     100
 351          RK    2300  0.0087   0.040   0.130    TRAP     2.0     4.0
 352          RK   10000  0.0070   0.035            TRAP    30.0     4.0

 353          KK    CO49
 354          KM        COMBINE SUB48 AND SUB32
 355          HC       2

 356          KK    RO49
 357          KM        ROUTE SUB48 TO SUB50
 358          RK    5550  0.0015   0.035       1    TRAP    50.0     2.5     YES

 359          KK   SUB50
 360          KM        RUNOFF FROM SUBBASIN 50
 361          BA    1.82
 362          LS              79
 363          UK    1300   0.006   0.200     100
 364          RK    5000  0.0050   0.040   0.072    TRAP     2.0     4.0
 365          RK    7300  0.0058   0.035            TRAP    15.0     3.0

 366          KK    CO51
 367          KM        COMBINE RUNOFF FROM SUB48 AND SUB50
 368          HC       2

 369          KK   SUB53
 370          KM        DIVERT FLOWS FROM SUB51 TO SUB64
 371          DT     D50
 372          DI       0     530     930    1500    2240    4100    7500
 373          DQ       0       0      90     300     640    1780    5180

 374          KK    RO53
 375          KM        ROUTE SUB50 TO RWCD SUB30
 376          RK    5300   .0025   0.035       1    TRAP    40.0     2.5     YES

 377          KK    CO55
 378          KM        COMBINE RUNOFF FROM SUB30 AND SUB53
 379          HC       2

 380          KK    RO55
 381          KM        ROUTE FLOWS FROM SUB30 TO SUB56
 382          RK    5630  0.0008   0.025       1    TRAP   145.0     3.0     YES

 383          KK   SUB56
 384          KM        RUNOFF FROM SUBBASIN 56
 385          BA    0.75
 386          LS              75
 387          UK    1250   0.006   0.200     100
 388          RK    3500   0.004   0.040   0.050    TRAP     2.0     4.0
 389          RK    5630  0.0003   0.025            TRAP   145.0     3.0
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 390        KK    CO57
 391        KM        COMBINE FLOWS FROM SUB55 AND SUB56
 392        HC       2

 393        KK   SUB57
 394        KM        DIVERTED FLOWS OF SUB40
 395        DR     D43

 396        KK    RO57
 397        KM        ROUTE DIVERTED FLOWS FROM SUB40 TO SUB58
 398        RK    7000   .0072   0.035       1    TRAP    10.0     3.0     YES

 399        KK   SUB58
 400        KM        RUNOFF FROM SUBBASIN 58
 401        BA    0.46
 402        LS              77
 403        UK    1000   0.010   0.200     100
 404        RK    2000    .008   0.040    .029    TRAP     2.0     4.0
 405        RK    7000   .0072   0.035            TRAP    10.0     3.0

 406        KK    CO59
 407        KM        COMBINE FLOWS FROM SUB57 AND SUB58
 408        HC       2

 409        KK    RO59
 410        KM        ROUTE FLOWS FROM SUB58 AND SUB60
 411        RK    5200  0.0720   0.035       1    TRAP    10.0     3.0     YES

 412        KK   SUB60
 413        KM        RUNOFF FROM SUBBASIN 60
 414        BA    0.45
 415        LS              77
 416        UK     500   0.010    .200     100
 417        RK    2400   .0087    .040    .034    TRAP     2.0     4.0
 418        RK    5200    .072    .035            TRAP    10.0     3.0

 419        KK    CO61
 420        KM        COMBINE FLOWS FROM SUB58 AND SUB60
 421        HC       2

 422        KK    RO61
 423        KM        ROUTE FLOWS FROM SUB60 TO SUB62
 424        RK   19000  0.0065   0.035       1    TRAP    10.0     3.0     YES

 425        KK   SUB62
 426        KM        RUNOFF FROM SUBBASIN 62
 427        BA    2.32
 428        LS              77
 429        UK   750.0   0.008   0.200     100
 430        RK    3000     .01   0.040     .04    TRAP     2.0     4.0
 431        RK   19000   .0065   0.035            TRAP     10.     3.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 432          KK    CO63
 433          KM        COMBINE FLOWS FROM SUB60 AND SUB62
 434          HC       2

 435          KK   SUB63
 436          KM        DIVERTED FLOWS OF SUB50
 437          DR     D50

 438          KK    RO63
 439          KM        ROUTE DIVERTED FLOWS FROM SUB50 TO SUB62
 440          RK    5000   .0026    .035       1    TRAP    30.0     4.0     YES

 441          KK    CO65
 442          KM        COMBINE RUNOFF FROM SUB62 AND SUB63 (DIVERTED FLOWS OF SUB50)
 443          HC       2

 444          KK    RO65
 445          KM        ROUTE SUB62 TO RWCD SUB56
 446          RK    3400   .0056    .035       1    TRAP    30.0     4.0     YES

 447          KK    CO67
 448          KM        COMBINE RUNOFF FROM SUB56 AND SUB65
 449          HC       2

 450          KK    RO67
 451          KM        ROUTE FLOWS FROM SUB67 TO SUB68
 452          RK    6030  0.0003   0.025       1    TRAP   150.0     3.0     YES

 453          KK   SUB68
 454          KM        RUNOFF FROM SUBBASIN 68
 455          BA    0.77
 456          LS              76
 457          UK     250   0.007   0.200     100
 458          RK    3500   .0043   0.040     .05    TRAP     2.0     4.0
 459          RK    6030  0.0003   0.025            TRAP   150.0     3.0

 460          KK    CO69
 461          KM        COMBINE FLOWS FROM SUB56 AND SUB68
 462          HC       2

 463          KK    RO69
 464          KM        ROUTE FLOWS FROM SUB63 TO SUB108
 465          RK    1400  0.0003   0.035       1    TRAP     150       3     YES

 466          KK   SUB70
 467          KM        RUNOFF FROM SUBBASIN 70
 468          BA    1.43
 469          LS              83
 470          UK    1000   0.011   0.200     100
 471          RK    3500   0.012   0.040  0.0502    TRAP     2.0     4.0
 472          RK   11200   0.011   0.035            TRAP    10.0     3.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 473          KK    RO71
 474          KM        ROUTE FLOWS FROM SUB70 AND SUB72
 475          RK    8800  0.0090   0.035       1    TRAP    10.0     3.0     YES

 476          KK  STRU11
 477          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #11
 478          RS       1    ELEV      61
 479          SV       0    8.43   24.76   49.39  106.77  161.53
 480          SQ       0     325    1300    1750    2150    2350
 481          SE      61      64      68      70      72      74

 482          KK   SUB72
 483          KM        RUNOFF FROM SUBBASIN 72
 484          BA    1.38
 485          LS              83
 486          UK    1250   0.011   0.200     100
 487          RK    2500   0.009   0.040  0.0359    TRAP     2.0     4.0
 488          RK    8800   0.009   0.035            TRAP    10.0     3.0

 489          KK  STRU10
 490          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #10
 491          RS       1    ELEV      61
 492          SV       0    8.43   24.76   49.39  106.77  161.53
 493          SQ       0     325    1300    1750    2150    2350
 494          SE      61      64      68      70      72      74

 495          KK    CO73
 496          KM        COMBINE FLOWS FROM SUB70 AND SUB72
 497          HC       2

 498          KK   SUB74
 499          KM        RUNOFF FROM SUBBASIN 74
 500          BA    2.78
 501          LS              79
 502          UK    1500   0.015   0.200     100
 503          RK    5000   0.013   0.040   0.009    TRAP     2.0     4.0
 504          RK    8400   0.009   0.035            TRAP    15.0     3.0

 505          KK    RO75
 506          KM        ROUTE FLOWS FROM SUB74 TO SUB76
 507          RK   14400  0.0100   0.035       1    TRAP    15.0     3.0     YES

 508          KK   SUB76
 509          KM        RUNOFF FROM SUBBASIN 76
 510          BA    2.13
 511          LS              82
 512          UK    1250   0.013   0.200     100
 513          RK    7000   0.010   0.040   0.176    TRAP     2.0     4.0
 514          RK   14400   0.010   0.035            TRAP    15.0     3.0
```

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

 515          KK    CO77
 516          KM        COMBINE FLOWS FROM SUB74 AND SUB76
 517          HC       2

 518          KK  STRU12
 519          KM        **ROUTE HYDRROGRAPH THROUGH BASIN OVERCHUTE #12
 520          RS       1    ELEV      64
 521          SV       0    2.53    4.46   11.27   27.16
 522          SQ       0     540    1025    1550    1900
 523          SE      64      68      70      72      74

 524          KK   SUB77
 525          KM        DIVERT 50% OF SUB76 TO SUB79
 526          DT     D79
 527          DI       0     100    1000   10000
 528          DQ       0      50     500    5000

 529          KK    CO81
 530          KM        COMBINE FLOWS FROM 50% OF SUB76 AND SUB72
 531          HC       2

 532          KK    RO81
 533          KM        ROUTE FLOWS FROM SUB81 TO SUB82
 534          RK    5400  0.0111   0.035       1    TRAP    10.0     3.0     YES

 535          KK   SUB82
 536          KM        RUNOFF FROM SUBBASIN 82
 537          BA    0.73
 538          LS              77
 539          UK    1250   0.010   0.200     100
 540          RK    2000  0.0100   0.040    .029    TRAP     2.0     4.0
 541          RK    5400  0.0111   0.035            TRAP    10.0     3.0

 542          KK    CO82
 543          KM        COMBINE FLOWS FROM SUB81 AND SUB82
 544          HC       2

 545          KK    RO82
 546          KM        ROUTE SUB82 TO SUB84
 547          RK    4800   .0069    .035       1    TRAP    10.0     4.0     YES

 548          KK   SUB78
 549          KM        RUNOFF FROM SUBBASIN 78
 550          BA    0.12
 551          LS              77
 552          UK     500   0.023   0.200     100
 553          RK    1600   0.013   0.040   0.043    TRAP     2.0     4.0
 554          RK     400   0.017   0.035            TRAP     8.0     1.5
```

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

 555          KK  STRU13
 556          KM        **ROUTE HYDROGRAPH THROUGH BASIN AT OVERCHUTE #13
 557          RS       1    ELEV      68
 558          SV       0    1.71    5.94   11.37   32.56
 559          SQ       0       0    1123    1375    1776
 560          SE      68      70      73      74      76

 561          KK   SUB79
 562          KM        DIVERTED FLOWS OF 50% OF SUB 77
 563          DR     D79

 564          KK    CO83
 565          KM        COMBINE RUNOFF FROM SUB78 AND DIVERTED FLOWS OF 50% OF SUB76
 566          HC       2

 567          KK    RO83
 568          KM        ROUTE FLOWS FROM SUB83 TO SUB84
 569          RK    1700  0.0059   0.035       1    TRAP    10.0     3.0     YES

 570          KK   SUB84
 571          KM        RUNOFF FROM SUBBASIN 84
 572          BA    0.15
 573          LS             77
 574          UK     250   0.008   0.200     100
 575          RK    1200  0.0086   0.040    0.05    TRAP     2.0     4.0
 576          RK    1700  0.0059   0.035            TRAP    10.0     3.0

 577          KK    CO85
 578          KM        COMBINE FLOWS FROM SUB83 AND SUB84
 579          HC       2

 580          KK    RO85
 581          KM        ROUTE SUB84 TO SUB86
 582          RK    7000   .0069    .035       1    TRAP    10.0     4.0     YES

 583          KK   SUB86
 584          KM        RUNOFF FROM SUBBASIN 86
 585          BA     .80
 586          LS             77
 587          UK    1000    .008    .200     100
 588          RK    3200    .012    .040    .046    TRAP     2.0     4.0
 589          RK    7800    .060    .035            TRAP    10.0     4.0

 590          KK    CO86
 591          KM        COMBINE SUB84 AND SUB86
 592          HC       2

 593          KK    RO86
 594          KM        ROUTE FLOWS FROM SUB86 TO SUB88
 595          RK    4000  0.0600   0.035       1    TRAP    10.0     4.0   YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 596          KK    CO87
 597          KM        COMBINE SUB82 AND SUB86
 598          HC       2

 599          KK   SUB88
 600          KM        RUNOFF FROM SUBBASIN 88
 601          BA     .34
 602          LS              77
 603          UK     500    .008    .200     100
 604          RK    4600    .012    .040    .066    TRAP     2.0     4.0
 605          RK    4000    .060    .035            TRAP    10.0     4.0

 606          KK    CO89
 607          KM        COMBINE RUNOFF FROM SUB82 AND SUB88
 608          HC       2

 609          KK    RO89
 610          KM        ROUTE FLOWS FROM SUB88 TO SUB90
 611          RK   14300  0.0073   0.035       1    TRAP    10.0     3.0     YES

 612          KK   SUB90
 613          KM        RUNOFF FROM SUBBASIN 90
 614          BA    2.27
 615          LS              77
 616          UK    1100   0.007   0.200     100
 617          RK    3000  0.0083   0.040    0.04    TRAP     2.0     4.0
 618          RK   14300  0.0073   0.035            TRAP    10.0     3.0

 619          KK    CO91
 620          KM        COMBINE FLOWS FROM SUB88 AND SUB90
 621          HC       2

 622          KK    RO91
 623          KM        ROUTE FLOWS FROM SUB90 TO SUB92
 624          RK   14400  0.0043   0.035       1    TRAP    10.0     3.0     YES

 625          KK   SUB92
 626          KM        RUNOFF FROM SUBBASIN 92
 627          BA    1.84
 628          LS              77
 629          UK     850   0.006   0.200     100
 630          RK    2000  0.0050   0.040   0.029    TRAP     2.0     4.0
 631          RK   14400  0.0043   0.035            TRAP    10.0     3.0

 632          KK    CO92
 633          KM        COMBINE FLOWS FROM SUB90 AND SUB92
 634          HC       2

 635          KK    RO92
 636          KM        ROUTE SUB92 TO RWCD SUB68
 637          RK    3400   .0080    .035       1    TRAP    20.0     3.0     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 638          KK    CO93
 639          KM        COMBINE RUNOFF FROM SUB68 AND SUB92
 640          HC       2

 641          KK   SUB94
 642          KM        RUNOFF FROM SUBBASIN 94
 643          BA    0.87
 644          LS              82
 645          UK     650  0.0175   0.200     100
 646          RK    6000  0.0083   0.040   0.043    TRAP     2.0     4.0
 647          RK    2500  0.0048   0.035            TRAP    10.0     3.0

 648          KK    RO95
 649          KM        ROUTE FLOWS FROM SUB94 TO SUB96
 650          RK    3600  0.0028   0.035       1    TRAP    10.0     3.0     YES

 651          KK   SUB96
 652          KM        RUNOFF FROM SUBBASIN 96
 653          BA     .14
 654          LS              77
 655          UK     300    .008    .200     100
 656          RK    1000   .0013    .040   .0143    TRAP     2.0     4.0
 657          RK    3600   .0028    .035            TRAP    10.0     3.0

 658          KK    CO97
 659          KM        COMBINE FLOWS FROM SUB94 AND SUB96
 660          HC       2

 661          KK   SUB98
 662          KM        RUNOFF FROM SUBBASIN 98
 663          BA    0.13
 664          LS              80
 665          UK     350   0.010   0.200     100
 666          RK    1200   0.013   0.040   0.017    TRAP     2.0     4.0

 667          KK    RO99
 668          KM        ROUTE FLOWS FROM SUB98 TO SUB100
 669          RK    1200  0.0060   0.035       1    TRAP     8.0     1.5     YES

 670          KK  SUB100
 671          KM        RUNOFF FROM SUBBASIN 100
 672          BA     .75
 673          LS              78
 674          UK     350   0.010    .200     100
 675          RK    4000    .013    .040    .075    TRAP     2.0     4.0
 676          RK    1200    .006    .035            TRAP     8.0     1.5

 677          KK   CO100
 678          KM        COMBINE FLOWS FROM SUB98 AND SUB100
 679          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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KK   CO101
KM        COMBINE RUNOFF HYDROGRAPHS FROM SUB 96 AND SUB 100
HC       2

KK   RO100
KM        ROUTE FLOWS FROM SUB100 TO SUB102
RK   18000  0.0083   0.035       1    TRAP    10.0     3.0     YES

KK  SUB102
KM        RUNOFF FROM SUBBASIN 102
BA    2.67
LS              77
UK    1500  0.0080   0.200     100
RK    5000  0.0100   0.040    0.07    TRAP     2.0     4.0
RK   18000  0.0083   0.035            TRAP    10.0     3.0

KK   CO103
KM        COMBINE FLOWS FROM SUB100 AND SUB102
HC       2

KK  SUB104
KM        RUNOFF FROM SUBBASIN 104
BA    3.11
LS              77
UK    1500   0.009   0.200     100
RK    4000  0.0100   0.040    0.06    TRAP     2.0     4.0
RK   20000  0.0060   0.035            TRAP    10.0     3.0

KK   CO105
KM        COMBINE SUBBASIN 102 AND 104
HC       2

KK   RO105
KM        ROUTE SUB102 AND SUB104 TO SUB106
RK    5800   .0043    .035       1    TRAP    25.0     2.0     YES

KK  SUB106
KM        RUNOFF FROM SUBBASIN 106
BA    2.66
LS              77
UK    1500   0.007   0.200     100
RK    1500  0.0067   0.040    0.02    TRAP     2.0     4.0
RK    8000  0.0053   0.035            TRAP     5.0     4.0

KK   CO107
KM        COMBINE SUB102, SUB104 AND SUB106
HC       2

KK   RO107
KM        ROUTE FLOWS FROM SUB107 TO SUB108
RK   16000  0.0046   0.035       1    TRAP    10.0     4.0     YES
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 722          KK  SUB108
 723          KM        RUNOFF FROM SUBBASIN 108
 724          BA    2.00
 725          LS              77
 726          UK    1100   0.006   0.200     100
 727          RK    2000  0.0050   0.040    0.03    TRAP     2.0     4.0
 728          RK   16000  0.0046   0.035            TRAP    10.0     4.0

 729          KK   CO108
 730          KM        COMBINE FLOWS FROM SUB107 AND SUB108
 731          HC       2

 732          KK   CO109
 733          KM        COMBINE RUNOFF FROM SUB93 AND SUB108
 734          HC       2

 735          KK   RO109
 736          KM        ROUTE FLOWS FROM SUB109 TO SUB110
 737          RK    4180  0.0003   0.025       1    TRAP   170.0     3.0     YES

 738          KK  SUB110
 739          KM        RUNOFF FROM SUBBASIN 110
 740          BA    1.35
 741          LS              77
 742          UK     250   0.004   0.200     100
 743          RK   14000  0.0045   0.040    0.20    TRAP     2.0     4.0
 744          RK    4180  0.0003   0.025            TRAP   170.0     3.0

 745          KK   CO111
 746          KM        COMBINE FLOWS FROM SUB109 AND SUB110
 747          HC       2
 748          ZZ
```

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

   37        SUB2
                V
                V
   44         R03
               .
               .
   47          .        SUB4
               .           .
               .           .
   54         C05............
                V
                V
   57         R05
               .
               .
   60          .        SUB6
               .           .
               .           .
   67         C07............
                V
                V
   70         R07
               .
               .
   73          .        SUB8
               .           .
               .           .
   80         C09............
               .
               .
   83          .       SUB10
               .           V
               .           V
   90          .      STRU01
               .           V
               .           V
   96          .       R0001
               .           .
               .           .
   99          .           .      SUB12
               .           .          V
               .           .          V
  106          .           .     STRU02
               .           .          .
               .           .          .
  112          .        C013............
               .           V
               .           V
  115          .        R013
               .           .
```

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                .         .
118             .         .      SUB14
                .         .         .
                .         .         .
125             .      CO15............
                .         .
                .         .
128             .         .      SUB16
                .         .         V
                .         .         V
135             .         .     STRU03
                .         .         .
                .         .         .
141             .         .         .      SUB18
                .         .         .         V
                .         .         .         V
148             .         .         .     STRU04
                .         .         .         .
                .         .         .         .
154             .         .      CO19............
                .         .         V
                .         .         V
157             .         .      RO19
                .         .         .
                .         .         .
160             .         .         .      SUB20
                .         .         .         .
                .         .         .         .
167             .         .      CO21............
                .         .         V
                .         .         V
170             .         .      RO21
                .         .         .
                .         .         .
173             .      CO23............
                .         .
                .         .
178             .         .------->    DT31
176             .      SUB23
                .         V
                .         V
181             .      RO23
                .         .
                .         .
184             .         .      SUB24
                .         .         .
                .         .         .
191             .      CO25............
                .         V
                .         V
194             .      RO25
                .         .
                .         .
197             .         .      SUB26
                .         .         .
                .         .         .
204             .      CO26............
                .         .
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                .          .
207         CO27............
                V
                V
210         RO27
                .
                .
213             .       SUB28
                .          .
                .          .
220         CO29............
                V
                V
223         RO29
                .
                .
226             .       SUB30
                .          .
                .          .
233         CO31............
                .
                .
238             .          .<-------    DT31
236             .       SUB31
                .          V
                .          V
239             .        RO31
                .          .
                .          .
242             .          .      SUB32
                .          .          .
                .          .          .
249             .       CO33 ............
                .          .
                .          .
252             .          .      SUB34
                .          .          V
                .          .          V
259             .          .       RO35
                .          .          V
                .          .          V
262             .          .     STRU06
                .          .          .
                .          .          .
268             .          .          .      SUB36
                .          .          .          V
                .          .          .          V
275             .          .          .     STRU07
                .          .          .          .
                .          .          .          .
281             .          .       CO37............
                .          .          .
                .          .          .
284             .          .          .      SUB38
                .          .          .          V
                .          .          .          V
291             .          .          .       RO39
                .          .          .          V
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                .         .         .         V
294             .         .         .     STRU08
                .         .         .         .
                .         .         .         .
300             .         .         .         .      SUB40
                .         .         .         .         V
                .         .         .         .         V
307             .         .         .         .     STRU09
                .         .         .         .         .
                .         .         .         .         .
313             .         .         .       CO41............
                .         .         .         .
                .         .         .         .
318             .         .         .         .-------->     D43
316             .         .         .      SUB41
                .         .         .         .
                .         .         .         .
321             .         .       CO45............
                .         .          V
                .         .          V
324             .         .       RO45
                .         .          .
                .         .          .
327             .         .         .      SUB46
                .         .         .         .
                .         .         .         .
334             .         .       CO46............
                .         .          V
                .         .          V
337             .         .       RO46
                .         .          .
                .         .          .
340             .       CO47............
                .          V
                .          V
343             .       RO47
                .          .
                .          .
346             .          .      SUB48
                .          .          .
                .          .          .
353             .       CO49............
                .          V
                .          V
356             .       RO49
                .          .
                .          .
359             .          .      SUB50
                .          .          .
                .          .          .
366             .       CO51............
                .          .
                .          .
371             .          .-------->     D50
369             .      SUB53
                .          V
                .          V
374             .       RO53
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                .          .
                .          .
377         CO55............
                V
                V
380         RO55
                .
                .
383             .      SUB56
                .          .
                .          .
390         CO57............
                .
                .
395             .          .<-------     D43
393             .      SUB57
                .          V
                .          V
396             .      RO57
                .          .
                .          .
399             .          .      SUB58
                .          .          .
                .          .          .
406             .      CO59............
                .          V
                .          V
409             .      RO59
                .          .
                .          .
412             .          .      SUB60
                .          .          .
                .          .          .
419             .      CO61............
                .          V
                .          V
422             .      RO61
                .          .
                .          .
425             .          .      SUB62
                .          .          .
                .          .          .
432             .      CO63............
                .          .
                .          .
437             .          .          .<-------     D50
435             .          .      SUB63
                .          .          V
                .          .          V
438             .          .      RO63
                .          .          .
                .          .          .
441             .      CO65............
                .          V
                .          V
444             .      RO65
                .          .
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            .          .
447      CO67............
            V
            V
450      RO67
            .
            .
453         .      SUB68
            .          .
            .          .
460      CO69............
            V
            V
463      RO69
            .
            .
466         .      SUB70
            .          V
            .          V
473         .       RO71
            .          V
            .          V
476         .     STRU11
            .          .
            .          .
482         .          .      SUB72
            .          .          V
            .          .          V
489         .          .     STRU10
            .          .          .
            .          .          .
495         .       CO73............
            .          .
            .          .
498         .          .      SUB74
            .          .          V
            .          .          V
505         .          .       RO75
            .          .          .
            .          .          .
508         .          .          .      SUB76
            .          .          .          .
            .          .          .          .
515         .          .       CO77............
            .          .          V
            .          .          V
518         .          .     STRU12
            .          .          .
            .          .          .
526         .          .          .-------->     D79
524         .          .      SUB77
            .          .          .
            .          .          .
529         .       CO81............
            .          V
            .          V
532         .       RO81
            .          .
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535          .          .       SUB82
             .          .          .
             .          .          .
542          .       CO82............
             .          V
             .          V
545          .       RO82
             .          .
             .          .
548          .          .       SUB78
             .          .          V
             .          .          V
555          .          .      STRU13
             .          .          .
             .          .          .
563          .          .          .          .<-------     D79
561          .          .          .       SUB79
             .          .          .          .
             .          .          .          .
564          .          .       CO83............
             .          .          V
             .          .          V
567          .          .       RO83
             .          .          .
             .          .          .
570          .          .          .       SUB84
             .          .          .          .
             .          .          .          .
577          .          .       CO85............
             .          .          V
             .          .          V
580          .          .       RO85
             .          .          .
             .          .          .
583          .          .          .       SUB86
             .          .          .          .
             .          .          .          .
590          .          .       CO86............
             .          .          V
             .          .          V
593          .          .       RO86
             .          .          .
             .          .          .
596          .       CO87............
             .          .
             .          .
599          .          .      SUB88
             .          .          .
             .          .          .
606          .       CO89............
             .          V
             .          V
609          .       RO89
             .          .
             .          .
612          .          .      SUB90
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          .          .          .
619       .       CO91............
          .          V
          .          V
622       .       RO91
          .          .
          .          .
625       .          .      SUB92
          .          .          .
          .          .          .
632       .       CO92............
          .          V
          .          V
635       .       RO92
          .          .
          .          .
638    CO93............
          .
          .
641       .      SUB94
          .          V
          .          V
648       .       RO95
          .          .
          .          .
651       .          .      SUB96
          .          .          .
          .          .          .
658       .       CO97............
          .          .
          .          .
661       .          .      SUB98
          .          .          V
          .          .          V
667       .          .       RO99
          .          .          .
          .          .          .
670       .          .          .     SUB100
          .          .          .          .
          .          .          .          .
677       .          .      CO100............
          .          .          .
          .          .          .
680       .      CO101............
          .          V
          .          V
683       .      RO100
          .          .
          .          .
686       .          .     SUB102
          .          .          .
          .          .          .
693       .      CO103............
          .          .
          .          .
696       .          .     SUB104
          .          .          .
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                .          .          .
703             .       CO105............
                .          V
                .          V
706             .       RO105
                .          .
                .          .
709             .          .      SUB106
                .          .          .
                .          .          .
716             .       CO107............
                .          V
                .          V
719             .       RO107
                .          .
                .          .
722             .          .      SUB108
                .          .          .
                .          .          .
729             .       CO108............
                .          .
                .          .
732        CO109............
               V
               V
735        RO109
               .
               .
738             .      SUB110
                .          .
                .          .
745        CO111............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1   ****************************************          ****************************************
    *                                      *          *                                      *
    *  FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *          *   U.S. ARMY CORPS OF ENGINEERS       *
    *           FEBRUARY 1981              *          *  THE HYDROLOGIC ENGINEERING CENTER   *
    *          REVISED  6 FEB 87           *          *         609 SECOND STREET            *
    *                                      *          *       DAVIS, CALIFORNIA 95616        *
    * RUN DATE  03/19/1990  TIME  09:22:59 *          * (916) 440-3285 OR (FTS) 448-3285    *  *
    *                                      *          *                                      *
    ****************************************          ****************************************
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EASTERN MARICOPA COUNTY MASTER DRAINAGE PLAN DATA FILE: EADMS13.DAT
A-N WEST REVISED MODEL WITH THE FOLLOWING ASSUMPTIONS

1. REVISED CN
2. CAP OVERCHUTES ARE MODELED
3. AREAL-REDUCTION METHODOLOGY USED

SPECIFICATIONS: THIS MODEL REPRESENT THE EXISTING CONDITION OF THE WATERSHED
TOTAL DRAINAGE AREA IS APPROXIMATELY 68 SQ. ML.
100-YEAR FREQUENCY, 24-HOUR DURATION

METHODLOGY: THE US CORPS OF ENGINEERS FLOOD HYDROLOGY MODEL HEC-1 DATED FEB. 1981, 1985 REVISION.
SCS TYPE II RAINFALL DISTRIBUTION
SCS RUNOFF CURVE NUMBER METHOD, TR-55 JUNE 1986
KINEMATIC WAVE PROCEDURE WAS USED FOR OVERLAND FLOW AND ROUTING TECHNIQUES.
APPROXIMATE DIRECTION, LOCATION, AND LENGTH OF THE WASHES HAVE BEEN EVALUATED BASED ON OUR FIELD INVESTIGATION, U.S.G.S. MAPS, LANDIS AERIAL SURVEYS DATED DECEMBER 1987.
THE NOAA TECHNICAL MEMORANDUM NWS HYDRO-40 DEPTH AREA RATIOS.

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

   IT        HYDROGRAPH TIME DATA
                   NMIN         15  MINUTES IN COMPUTATION INTERVAL
                  IDATE      1    0  STARTING DATE
                  ITIME       0000  STARTING TIME
                     NQ        120  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE      2    0  ENDING DATE
                 NDTIME       0545  ENDING TIME
                 ICENT          19  CENTURY MARK

             COMPUTATION INTERVAL     .25 HOURS
                  TOTAL TIME BASE   29.75 HOURS
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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

29 JD INDEX STORM NO. 1

STRM 3.65 PRECIPITATION DEPTH

TRDA .01 TRANSPOSITION DRAINAGE AREA

30 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

35 JD INDEX STORM NO. 2

STRM 3.52 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

36 JD INDEX STORM NO. 3

STRM 3.44 PRECIPITATION DEPTH

TRDA 70.75 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.19	.19	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.01	.01	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

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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

29 JD        INDEX STORM NO. 1
                STRM        3.65  PRECIPITATION DEPTH
                TRDA         .01  TRANSPOSITION DRAINAGE AREA

30 PI          PRECIPITATION PATTERN
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .01     .01
                .01     .01     .01     .01     .01     .01     .01     .01     .01     .01
                .01     .01     .02     .02     .02     .02     .19     .19     .04     .04
                .02     .02     .01     .01     .01     .01     .01     .01     .01     .01
                .01     .01     .01     .01     .01     .01     .01     .01     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00

35 JD        INDEX STORM NO. 2
                STRM        3.52  PRECIPITATION DEPTH
                TRDA       30.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .01     .01
                .01     .01     .01     .01     .01     .01     .01     .01     .01     .01
                .01     .01     .02     .02     .02     .02     .19     .19     .04     .04
                .02     .02     .01     .01     .01     .01     .01     .01     .01     .01
                .01     .01     .01     .01     .01     .01     .01     .01     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00

36 JD        INDEX STORM NO. 3
                STRM        3.44  PRECIPITATION DEPTH
                TRDA       70.75  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .01     .01
                .01     .01     .01     .01     .01     .01     .01     .01     .01     .01
                .01     .01     .02     .02     .02     .02     .19     .19     .04     .04
                .02     .02     .01     .01     .01     .01     .01     .01     .01     .01
                .01     .01     .01     .01     .01     .01     .01     .01     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
                .00     .00     .00     .00     .00     .00
```

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									
+		SUB2	549.	13.75	297.	108.	87.	3.41		
	ROUTED TO									
+		R03	521.	14.25	284.	105.	84.	3.41		
	HYDROGRAPH AT									
+		SUB4	767.	13.75	399.	141.	114.	3.27		
	2 COMBINED AT									
+		C05	1234.	14.00	670.	244.	197.	6.68		
	ROUTED TO									
+		R05	1210.	14.25	662.	241.	195.	6.68		
	HYDROGRAPH AT									
+		SUB6	2800.	12.25	551.	171.	138.	3.41		
	2 COMBINED AT									
+		C07	2770.	12.25	1133.	410.	331.	10.09		
	ROUTED TO									
+		R07	2984.	12.50	1196.	427.	345.	10.09		
	HYDROGRAPH AT									
+		SUB8	442.	13.50	215.	75.	61.	1.84		
	2 COMBINED AT									
+		C09	3063.	12.50	1404.	501.	404.	11.93		
	HYDROGRAPH AT									
+		SUB10	171.	12.50	42.	13.	11.	.33		
	ROUTED TO									
+		STRU01	158.	12.50	42.	13.	11.	.33		
+									70.12	12.50
	ROUTED TO									
+		R0001	157.	12.50	42.	13.	11.	.33		
	HYDROGRAPH AT									
+		SUB12	449.	12.50	106.	34.	27.	.75		
	ROUTED TO									
+		STRU02	446.	12.50	106.	34.	27.	.75		
+									69.07	12.50
	2 COMBINED AT									
+		C013	599.	12.50	147.	47.	38.	1.08		

	ROUTED TO								
+		R013	552.	12.75	145.	47.	38.	1.08	
	HYDROGRAPH AT								
+		SUB14	366.	12.75	153.	52.	42.	1.17	
	2 COMBINED AT								
+		C015	910.	12.75	295.	98.	79.	2.25	
	HYDROGRAPH AT								
+		SUB16	349.	12.50	95.	31.	25.	.71	
	ROUTED TO								
+		STRU03	339.	12.50	95.	31.	25.	.71	
+									68.97 12.75
	HYDROGRAPH AT								
+		SUB18	457.	13.00	183.	61.	49.	1.50	
	ROUTED TO								
+		STRU04	456.	13.00	184.	61.	49.	1.50	
+									74.18 13.00
	2 COMBINED AT								
+		CO19	768.	12.75	276.	91.	74.	2.21	
	ROUTED TO								
+		RO19	716.	13.00	273.	91.	73.	2.21	
	HYDROGRAPH AT								
+		SUB20	917.	12.50	178.	56.	45.	1.05	
	2 COMBINED AT								
+		CO21	1265.	12.50	445.	146.	118.	3.26	
	ROUTED TO								
+		RO21	1226.	12.75	444.	146.	118.	3.26	
	2 COMBINED AT								
+		CO23	2133.	12.75	739.	244.	197.	3.26	
	DIVERSION TO								
+		DT31	1500.	12.50	684.	230.	186.	3.26	
	HYDROGRAPH AT								
+		SUB23	633.	12.75	55.	14.	11.	3.26	
	ROUTED TO								
+		RO23	483.	12.75	55.	14.	11.	3.26	
	HYDROGRAPH AT								
+		SUB24	1525.	12.50	309.	99.	80.	2.11	
	2 COMBINED AT								
+		CO25	1611.	12.75	360.	111.	90.	5.37	

	ROUTED TO								
+		RO25	1571.	12.75	362.	113.	91.	5.37	
	HYDROGRAPH AT								
+		SUB26	555.	13.75	319.	112.	91.	2.69	
	2 COMBINED AT								
+		CO26	1959.	12.75	676.	223.	180.	8.06	
	2 COMBINED AT								
+		CO27	4747.	12.75	2066.	720.	581.	19.99	
	ROUTED TO								
+		RO27	4614.	12.75	2094.	731.	590.	19.99	
	HYDROGRAPH AT								
+		SUB28	232.	13.25	108.	37.	30.	.97	
	2 COMBINED AT								
+		CO29	4766.	12.75	2198.	766.	619.	20.96	
	ROUTED TO								
+		RO29	4661.	13.00	2130.	757.	611.	20.96	
	HYDROGRAPH AT								
+		SUB30	121.	15.75	94.	39.	32.	1.33	
	2 COMBINED AT								
+		CO31	4665.	13.00	2208.	795.	641.	22.29	
	HYDROGRAPH AT								
+		SUB31	1500.	12.50	684.	230.	186.	3.26	
	ROUTED TO								
+		RO31	1500.	13.00	669.	228.	184.	3.26	
	HYDROGRAPH AT								
+		SUB32	524.	13.50	283.	99.	80.	2.27	
	2 COMBINED AT								
+		CO33	1995.	13.25	951.	328.	265.	2.27	
	HYDROGRAPH AT								
+		SUB34	560.	13.00	232.	78.	63.	1.84	
	ROUTED TO								
+		RO35	551.	13.25	231.	78.	63.	1.84	
	ROUTED TO								
+		STRU06	310.	14.25	218.	77.	62.	1.84	
+									66.13 14.25
	HYDROGRAPH AT								
+		SUB36	248.	12.50	51.	16.	13.	.33	

	ROUTED TO								
+		STRU07	201.	12.50	50.	16.	13.	.33	
+									73.07 12.50
	2 COMBINED AT								
+		CO37	346.	14.00	259.	93.	75.	2.17	
	HYDROGRAPH AT								
+		SUB38	471.	12.75	135.	44.	35.	.99	
	ROUTED TO								
+		RO39	442.	12.75	135.	44.	35.	.99	
	ROUTED TO								
+		STRU08	485.	12.75	133.	43.	35.	.99	
+									630.00 .00
	HYDROGRAPH AT								
+		SUB40	315.	12.50	63.	20.	16.	.45	
	ROUTED TO								
+		STRU09	313.	12.50	63.	20.	16.	.45	
+									630.00 .00
	2 COMBINED AT								
+		CO41	707.	12.75	193.	63.	51.	1.44	
	DIVERSION TO								
+		D43	353.	12.75	97.	31.	25.	1.44	
	HYDROGRAPH AT								
+		SUB41	353.	12.75	97.	31.	25.	1.44	
	2 COMBINED AT								
+		CO45	638.	12.75	352.	124.	100.	3.61	
	ROUTED TO								
+		RO45	589.	13.00	348.	123.	99.	3.61	
	HYDROGRAPH AT								
+		SUB46	796.	13.00	338.	111.	89.	2.11	
	2 COMBINED AT								
+		CO46	1373.	13.00	675.	232.	188.	5.72	
	ROUTED TO								
+		RO46	1315.	13.25	669.	231.	187.	5.72	
	2 COMBINED AT								
+		CO47	3297.	13.25	1609.	556.	449.	7.99	
	ROUTED TO								
+		RO47	3277.	13.25	1610.	556.	449.	7.99	
	HYDROGRAPH AT								
+		SUB48	185.	13.25	94.	33.	27.	.91	

	2 COMBINED AT						
+		CO49	3455.	13.25	1701.	588.	475.	8.90
	ROUTED TO						
+		RO49	3407.	13.50	1679.	585.	472.	8.90
	HYDROGRAPH AT						
+		SUB50	342.	13.75	200.	71.	57.	1.82
	2 COMBINED AT						
+		CO51	3734.	13.50	1871.	654.	528.	10.72
	DIVERSION TO						
+		D50	1556.	13.50	538.	137.	111.	10.72
	HYDROGRAPH AT						
+		SUB53	2178.	13.50	1336.	517.	417.	10.72
	ROUTED TO						
+		RO53	2167.	13.50	1330.	514.	415.	10.72
	2 COMBINED AT						
+		CO55	6404.	13.25	3499.	1298.	1048.	33.01
	ROUTED TO						
+		RO55	6332.	13.25	3443.	1287.	1039.	33.01
	HYDROGRAPH AT						
+		SUB56	93.	14.75	61.	23.	19.	.75
	2 COMBINED AT						
+		CO57	6344.	13.25	3495.	1308.	1056.	33.76
	HYDROGRAPH AT						
+		SUB57	353.	12.75	97.	31.	25.	1.44
	ROUTED TO						
+		RO57	353.	13.00	97.	32.	26.	1.44
	HYDROGRAPH AT						
+		SUB58	111.	13.00	51.	17.	14.	.46
	2 COMBINED AT						
+		CO59	465.	13.00	149.	49.	40.	.46
	ROUTED TO						
+		RO59	446.	13.00	149.	49.	40.	.46
	HYDROGRAPH AT						
+		SUB60	154.	12.50	53.	17.	14.	.45
	2 COMBINED AT						
+		CO61	562.	13.00	198.	66.	54.	.91
	ROUTED TO						
+		RO61	476.	13.50	191.	66.	53.	.91

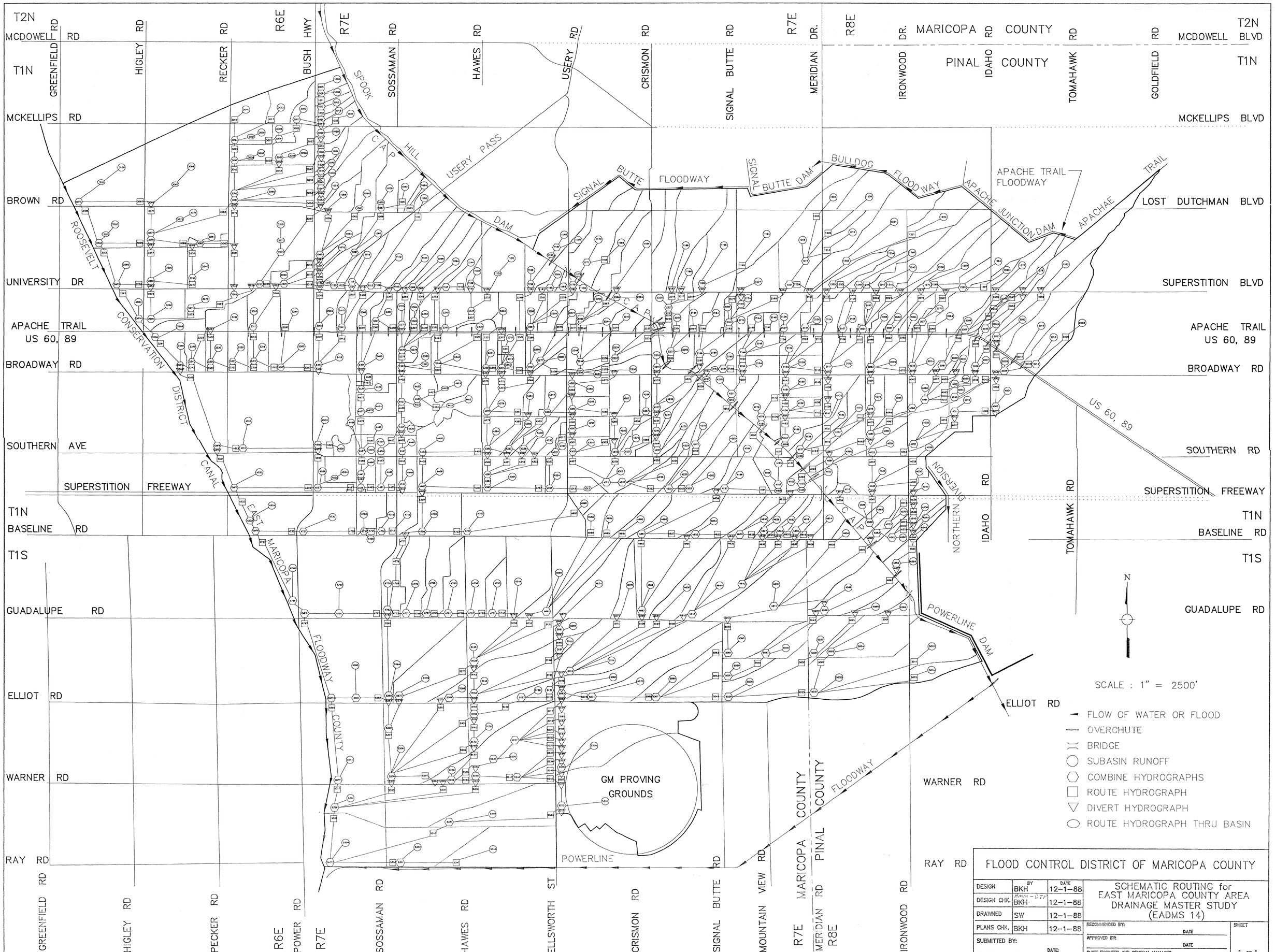
	HYDROGRAPH AT								
+		SUB62	546.	13.25	244.	84.	68.	2.32	
	2 COMBINED AT								
+		CO63	975.	13.50	429.	149.	120.	3.23	
	HYDROGRAPH AT								
+		SUB63	1556.	13.50	538.	137.	111.	10.72	
	ROUTED TO								
+		RO63	1545.	13.50	532.	137.	111.	10.72	
	2 COMBINED AT								
+		CO65	2539.	13.50	967.	288.	233.	3.23	
	ROUTED TO								
+		RO65	2495.	13.50	966.	288.	233.	3.23	
	2 COMBINED AT								
+		CO67	8397.	13.50	4407.	1580.	1275.	36.99	
	ROUTED TO								
+		RO67	8327.	13.75	4370.	1572.	1269.	36.99	
	HYDROGRAPH AT								
+		SUB68	168.	13.25	76.	27.	21.	.77	
	2 COMBINED AT								
+		CO69	8445.	13.75	4430.	1596.	1288.	37.76	
	ROUTED TO								
+		RO69	8427.	13.75	4413.	1593.	1286.	37.76	
	HYDROGRAPH AT								
+		SUB70	537.	12.75	212.	69.	56.	1.43	
	ROUTED TO								
+		RO71	534.	13.00	209.	69.	56.	1.43	
	ROUTED TO								
+		STRU11	493.	13.25	207.	69.	56.	1.43	
+									64.60 13.25
	HYDROGRAPH AT								
+		SUB72	469.	13.00	203.	67.	54.	1.38	
	ROUTED TO								
+		STRU10	446.	13.25	202.	67.	54.	1.38	
+									64.32 13.25
	2 COMBINED AT								
+		CO73	930.	13.25	405.	135.	109.	2.81	
	HYDROGRAPH AT								
+		SUB74	610.	13.50	314.	110.	89.	2.78	

	ROUTED TO								
+		RO75	595.	13.75	307.	109.	88.	2.78	
	HYDROGRAPH AT								
+		SUB76	703.	13.00	289.	97.	78.	2.13	
	2 COMBINED AT								
+		CO77	1179.	13.50	584.	204.	165.	4.91	
	ROUTED TO								
+		STRU12	1152.	13.50	584.	204.	165.	4.91	
+									70.21 13.75
	DIVERSION TO								
+		D79	576.	13.50	292.	102.	82.	4.91	
	HYDROGRAPH AT								
+		SUB77	576.	13.50	292.	102.	82.	4.91	
	2 COMBINED AT								
+		CO81	1453.	13.25	692.	236.	190.	7.72	
	ROUTED TO								
+		RO81	1451.	13.50	690.	235.	190.	7.72	
	HYDROGRAPH AT								
+		SUB82	155.	13.25	80.	28.	22.	.73	
	2 COMBINED AT								
+		CO82	1598.	13.50	766.	262.	212.	8.45	
	ROUTED TO								
+		RO82	1575.	13.50	763.	262.	211.	8.45	
	HYDROGRAPH AT								
+		SUB78	59.	12.50	15.	5.	4.	.12	
	ROUTED TO								
+		STRU13	62.	12.75	12.	4.	3.	.12	
+									70.16 12.75
	HYDROGRAPH AT								
+		SUB79	576.	13.50	292.	102.	82.	4.91	
	2 COMBINED AT								
+		CO83	621.	13.50	313.	109.	88.	.12	
	ROUTED TO								
+		RO83	614.	13.75	313.	109.	88.	.12	
	HYDROGRAPH AT								
+		SUB84	87.	12.50	19.	6.	5.	.15	
	2 COMBINED AT								
+		CO85	627.	13.50	325.	114.	92.	.27	
	ROUTED TO								
+		RO85	625.	13.75	324.	114.	92.	.27	

	HYDROGRAPH AT						
+		SUB86	176.	13.25	88.	30.	24.	.80
	2 COMBINED AT						
+		CO86	762.	13.75	406.	143.	115.	1.07
	ROUTED TO						
+		RO86	760.	13.75	406.	143.	115.	1.07
	2 COMBINED AT						
+		CO87	2289.	13.50	1160.	402.	325.	9.52
	HYDROGRAPH AT						
+		SUB88	123.	12.75	40.	13.	11.	.34
	2 COMBINED AT						
+		CO89	2349.	13.50	1195.	415.	335.	9.86
	ROUTED TO						
+		RO89	2338.	13.75	1180.	411.	332.	9.86
	HYDROGRAPH AT						
+		SUB90	456.	13.50	234.	82.	66.	2.27
	2 COMBINED AT						
+		CO91	2763.	13.75	1404.	492.	397.	12.13
	ROUTED TO						
+		RO91	2716.	14.00	1381.	487.	393.	12.13
	HYDROGRAPH AT						
+		SUB92	372.	13.50	189.	67.	54.	1.84
	2 COMBINED AT						
+		CO92	3018.	14.00	1553.	552.	446.	13.97
	ROUTED TO						
+		RO92	2991.	14.00	1550.	551.	445.	13.97
	2 COMBINED AT						
+		CO93	10815.	13.75	5836.	2102.	1696.	51.73
	HYDROGRAPH AT						
+		SUB94	386.	12.75	123.	40.	32.	.87
	ROUTED TO						
+		RO95	382.	12.75	122.	40.	32.	.87
	HYDROGRAPH AT						
+		SUB96	64.	12.50	17.	5.	4.	.14
	2 COMBINED AT						
+		CO97	435.	12.75	138.	45.	37.	1.01
	HYDROGRAPH AT						
+		SUB98	80.	12.25	18.	6.	5.	.13

	ROUTED TO						
+		RO99	76.	12.50	18.	6.	5.	.13
	HYDROGRAPH AT						
+		SUB100	372.	12.50	94.	30.	24.	.75
	2 COMBINED AT						
+		CO100	446.	12.50	112.	36.	29.	.88
	2 COMBINED AT						
+		CO101	757.	12.75	249.	81.	65.	1.89
	ROUTED TO						
+		RO100	758.	13.00	253.	83.	67.	1.89
	HYDROGRAPH AT						
+		SUB102	437.	14.00	256.	93.	75.	2.67
	2 COMBINED AT						
+		CO103	1089.	13.25	506.	176.	142.	4.56
	HYDROGRAPH AT						
+		SUB104	499.	14.00	300.	109.	88.	3.11
	2 COMBINED AT						
+		CO105	1473.	13.25	800.	283.	229.	7.67
	ROUTED TO						
+		RO105	1471.	13.50	796.	283.	228.	7.67
	HYDROGRAPH AT						
+		SUB106	433.	13.75	271.	98.	79.	2.66
	2 COMBINED AT						
+		CO107	1874.	13.50	1057.	379.	306.	10.33
	ROUTED TO						
+		RO107	1796.	14.00	1035.	374.	302.	10.33
	HYDROGRAPH AT						
+		SUB108	347.	13.75	198.	72.	58.	2.00
	2 COMBINED AT						
+		CO108	2124.	14.00	1223.	444.	359.	12.33
	2 COMBINED AT						
+		CO109	12461.	13.75	6914.	2501.	2018.	64.06
	ROUTED TO						
+		RO109	12434.	14.00	6913.	2493.	2011.	64.06
	HYDROGRAPH AT						
+		SUB110	272.	13.50	134.	48.	39.	1.35
	2 COMBINED AT						
+		CO111	12637.	14.00	7022.	2535.	2045.	65.41

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



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

	BY	DATE
DESIGN	BKH	12-1-88
DESIGN CHK.	BKH	12-1-88
DRAWNED	SW	12-1-88
PLANS CHK.	BKH	12-1-88

SUBMITTED BY: DATE:

SCHEMATIC ROUTING for EAST MARICOPA COUNTY AREA DRAINAGE MASTER STUDY (EADMS 14)

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 1 OF 1

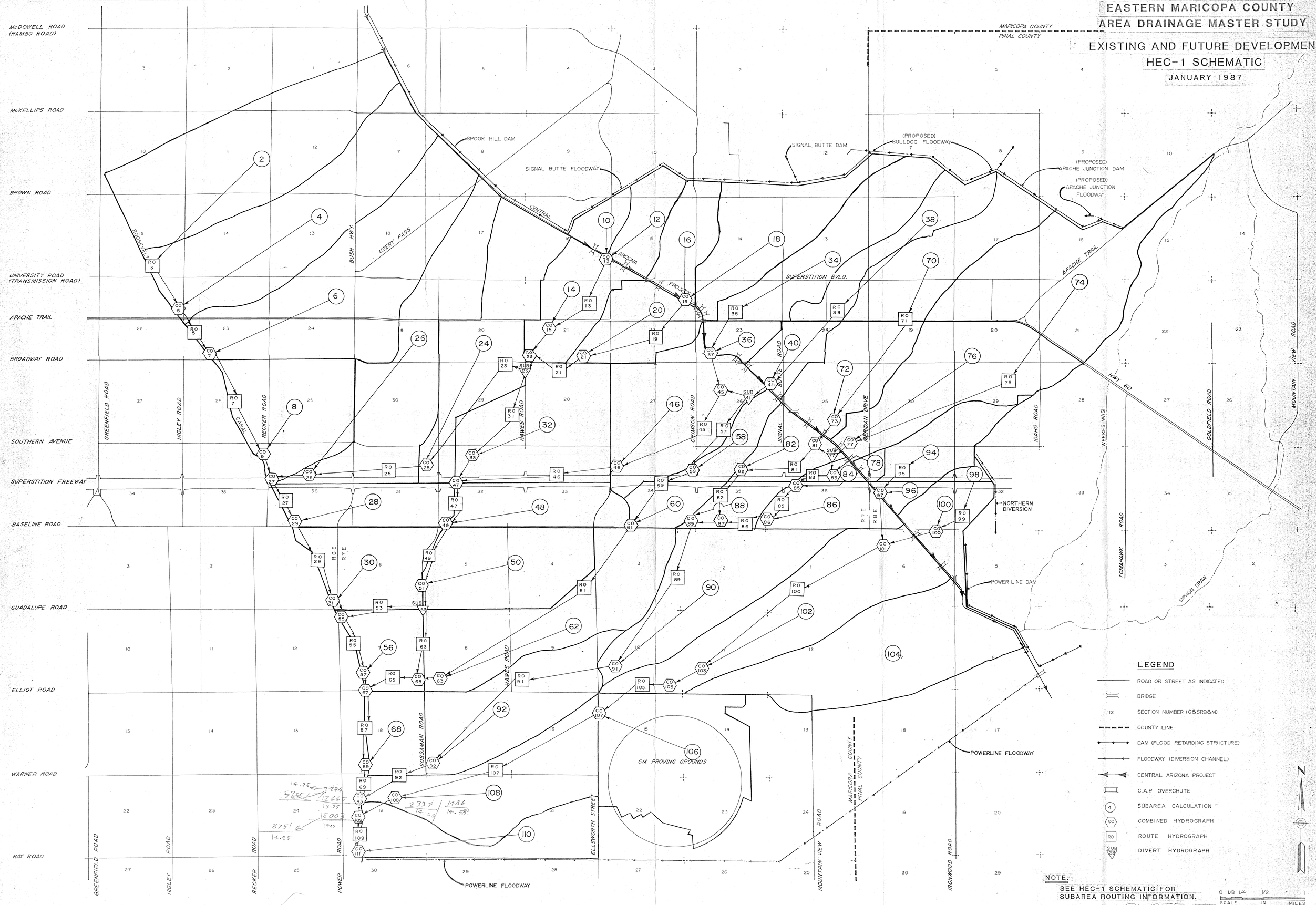
PLATE VI

EXHIBIT

EASTERN MARICOPA COUNTY AREA DRAINAGE MASTER STUDY

EXISTING AND FUTURE DEVELOPMENT HEC-1 SCHEMATIC

JANUARY 1987



NOTE:
SEE HEC-1 SCHEMATIC FOR SUBAREA ROUTING INFORMATION.

PLATE VII